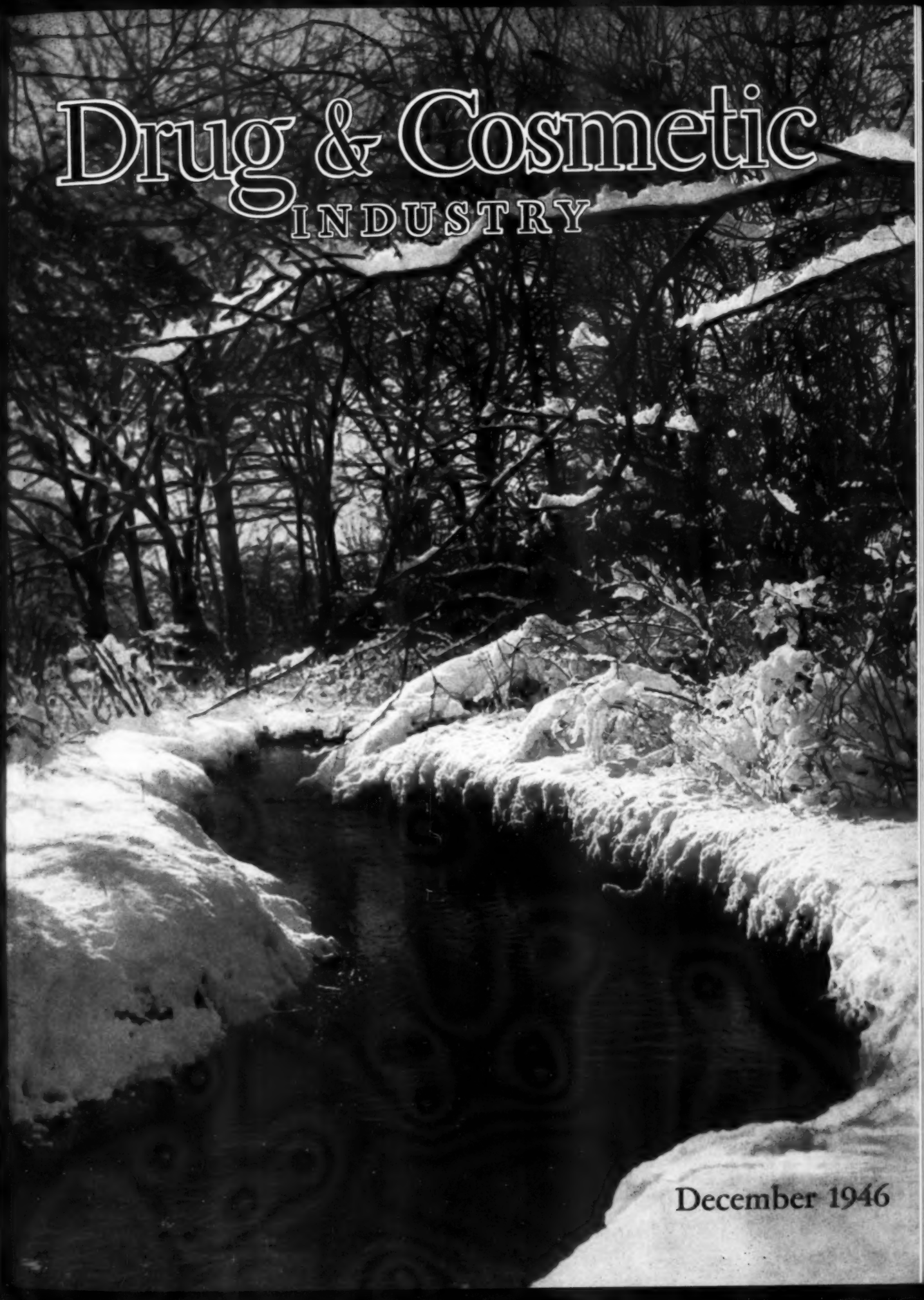
Drug & Cosmetic INDUSTRY



December 1946

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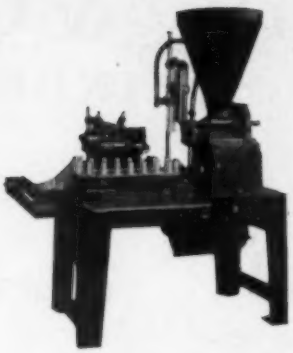

● *If your tube filling facilities are inadequate, ship us your bulk product. We'll package it for you, in tubes, jars or tins, ready for distribution to trade and consumer.*

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Drug & Cosmetic INDUSTRY

DECEMBER 1946

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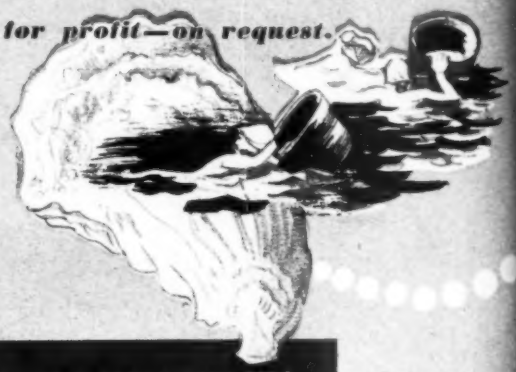

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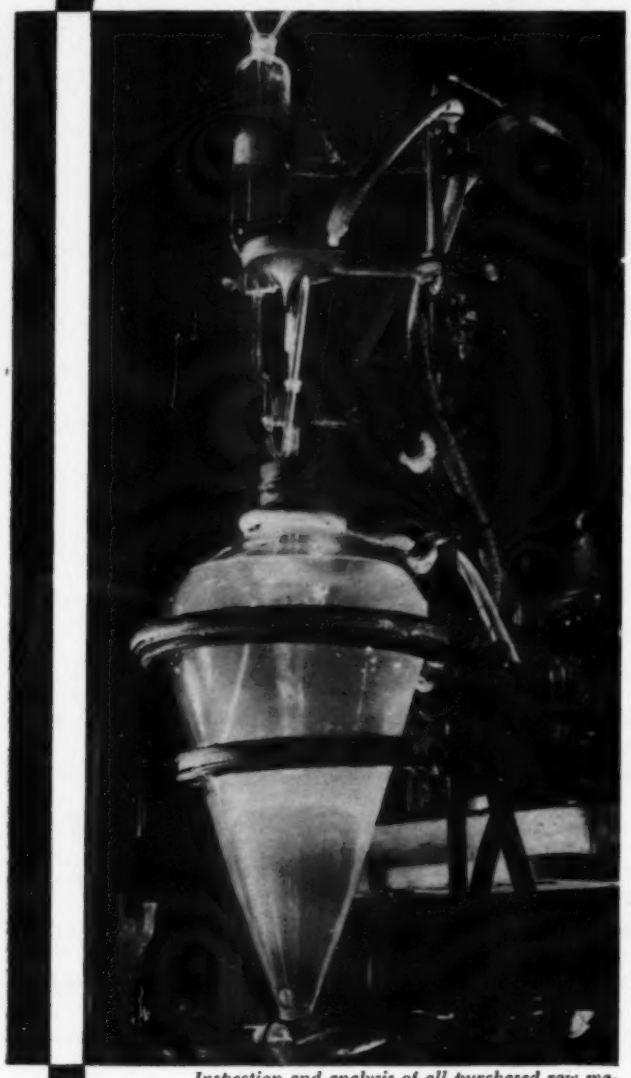

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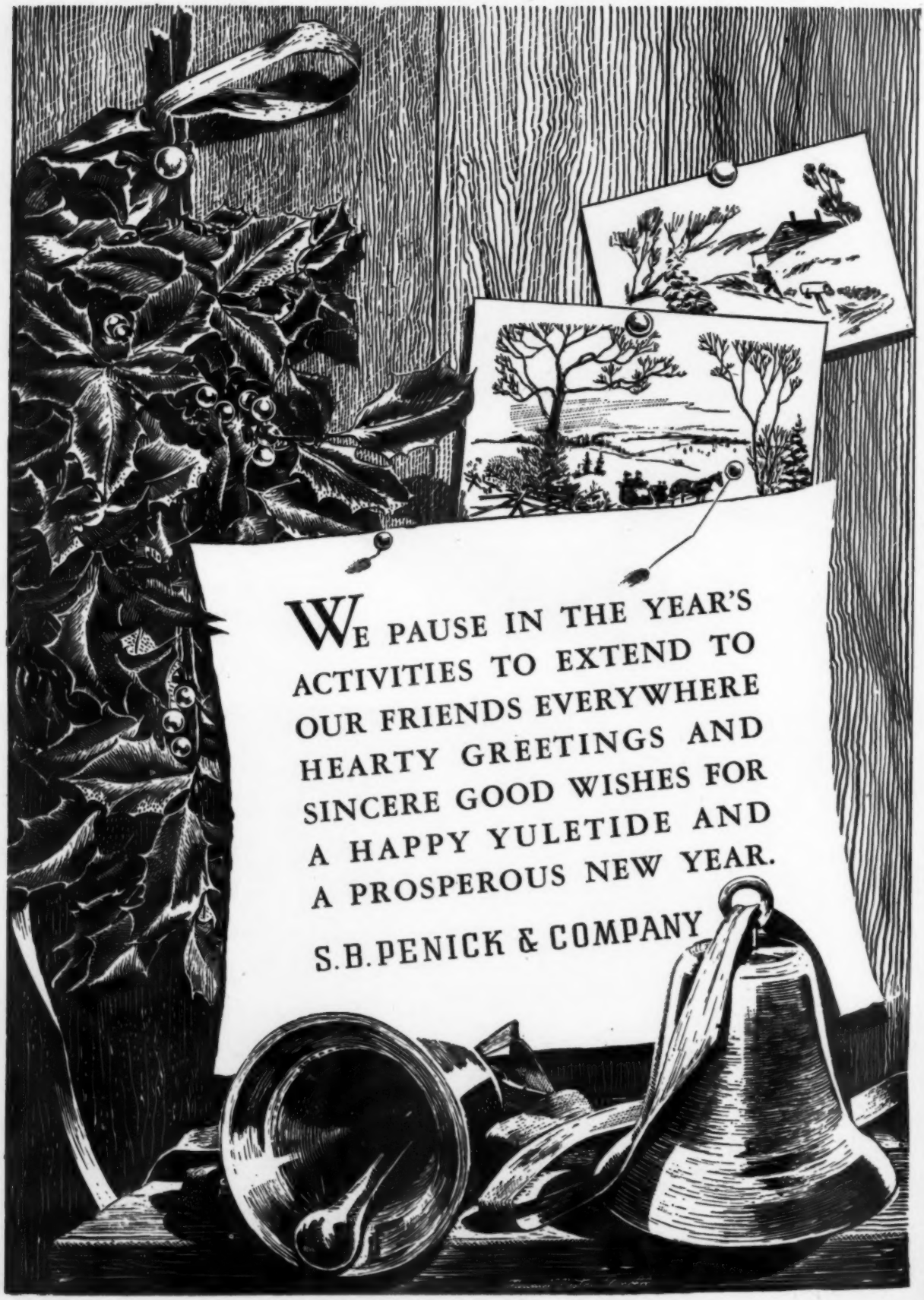
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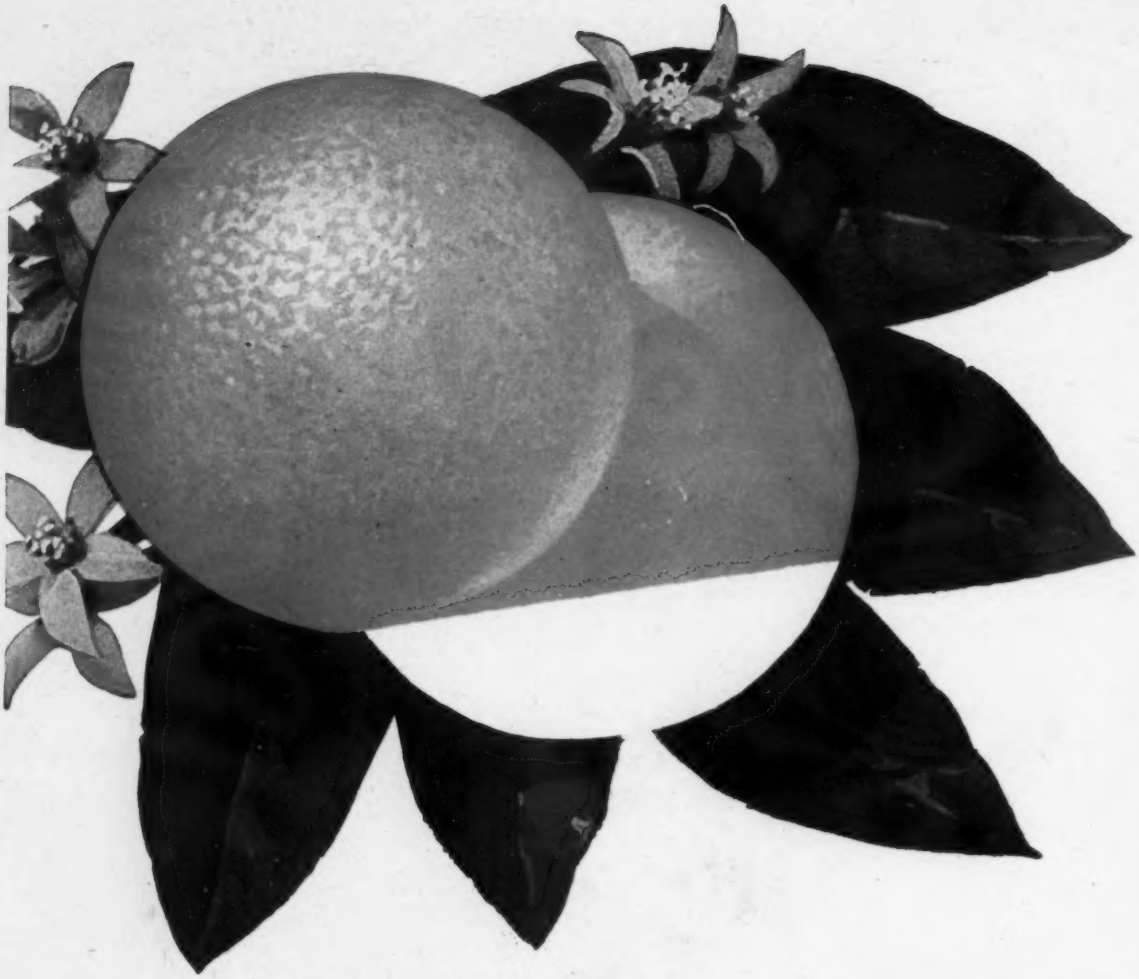

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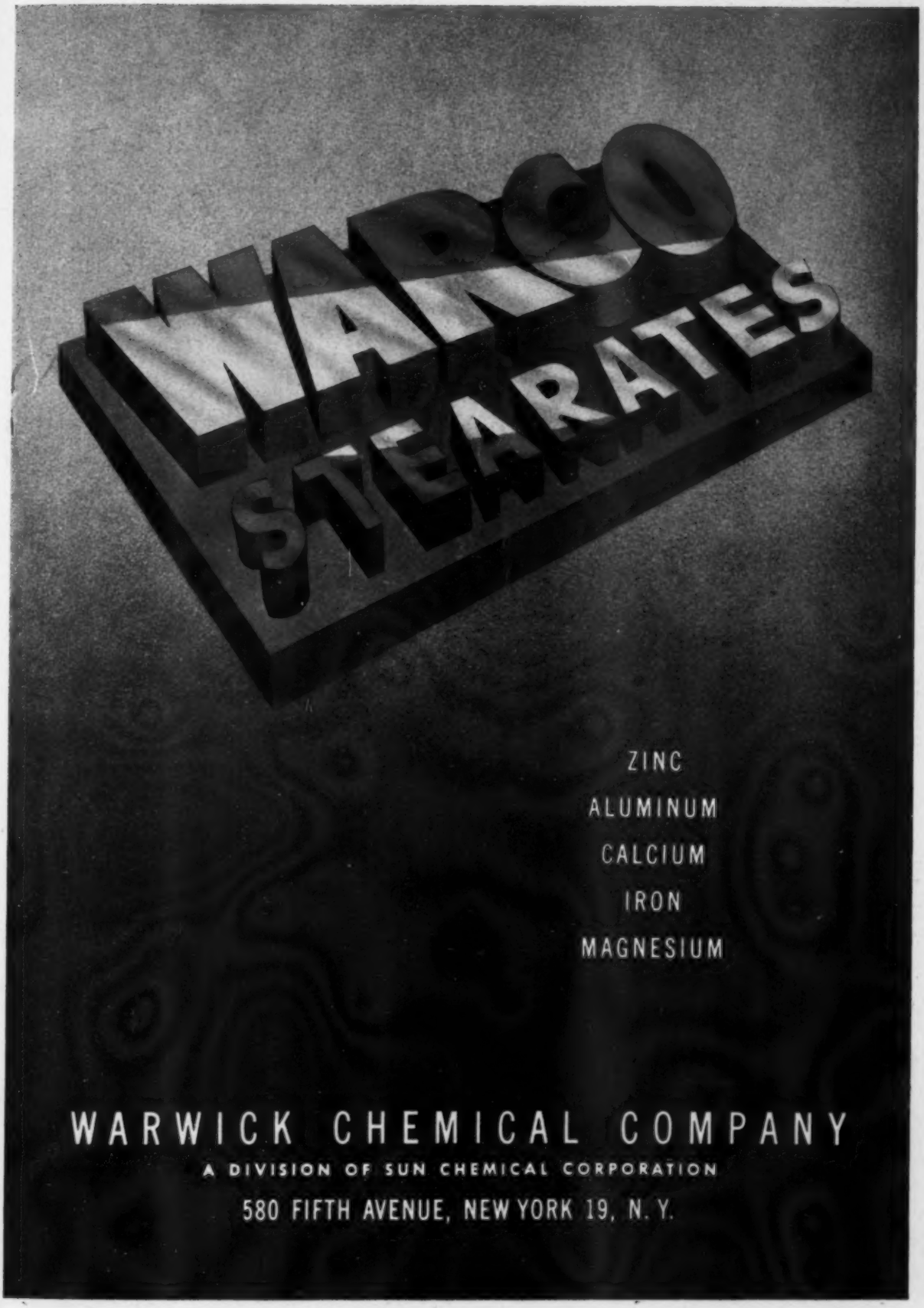
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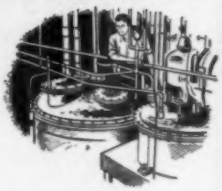

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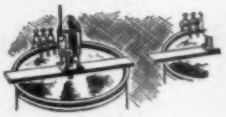

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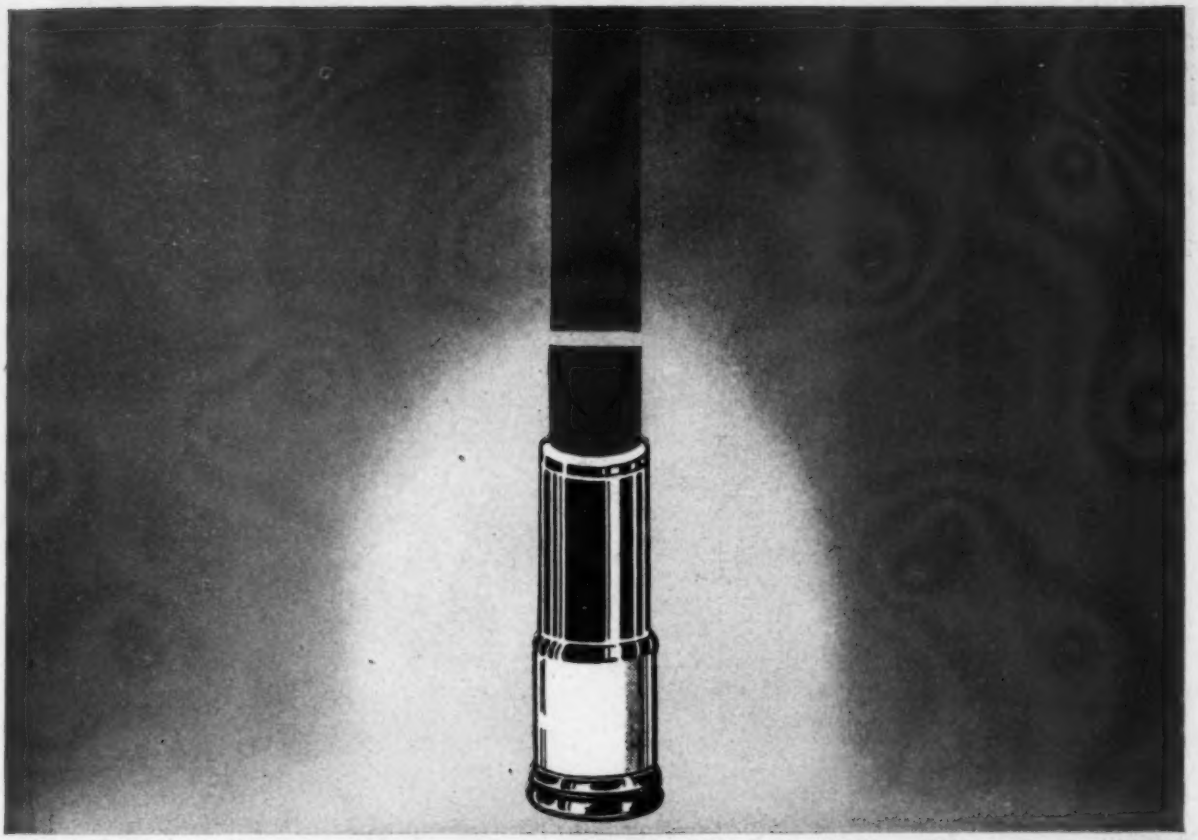

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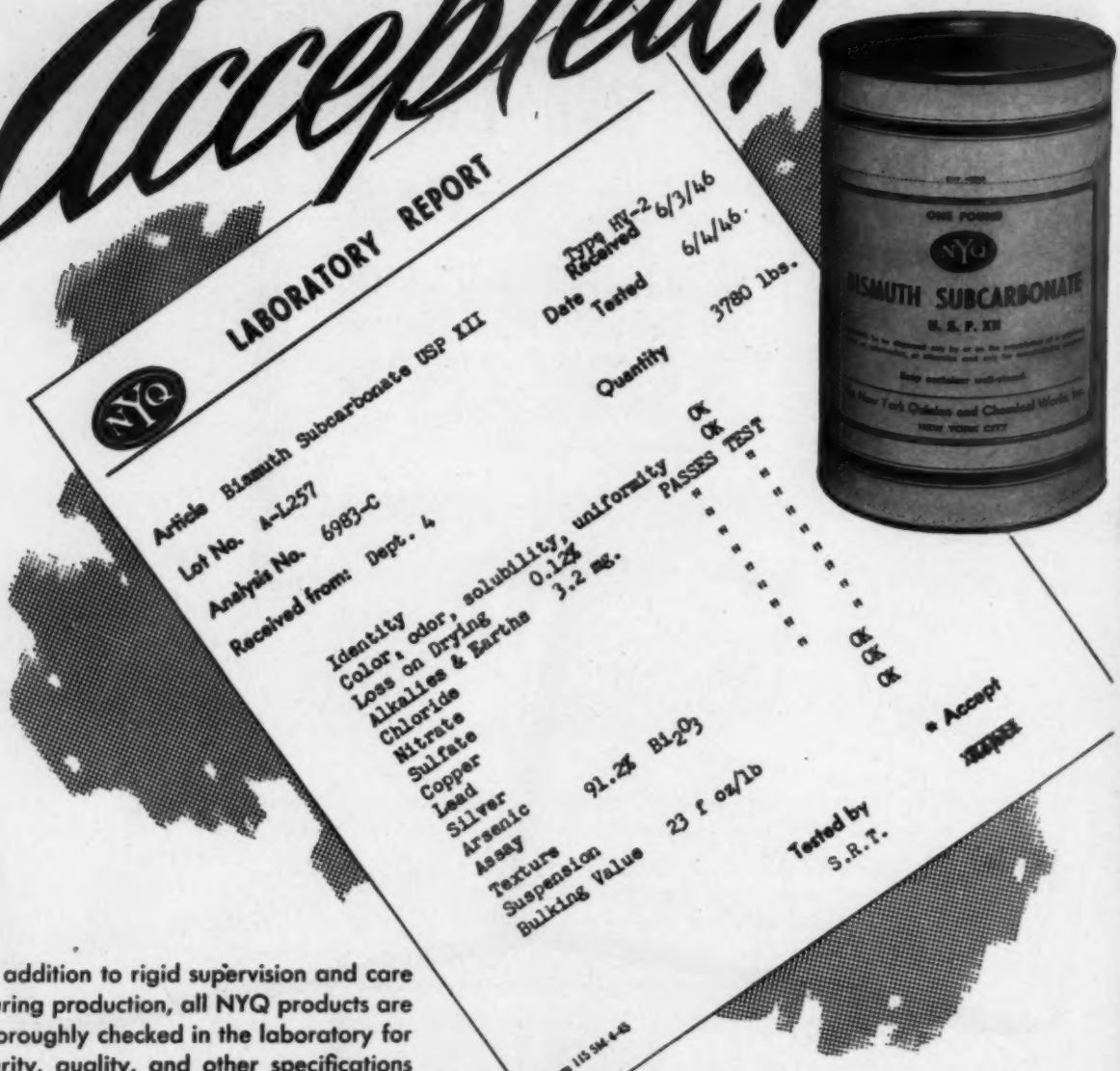

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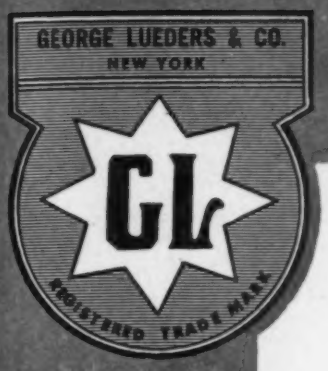

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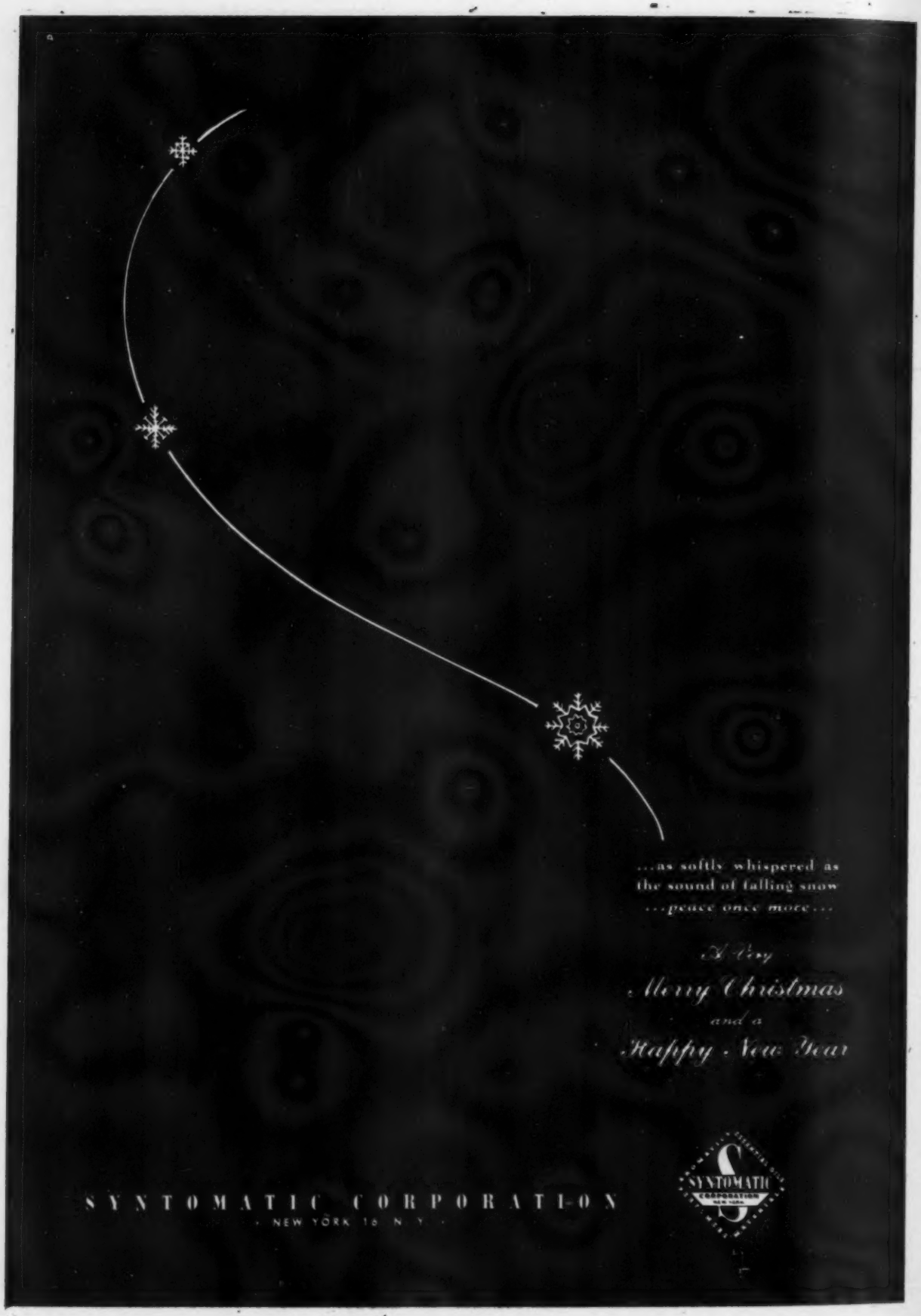
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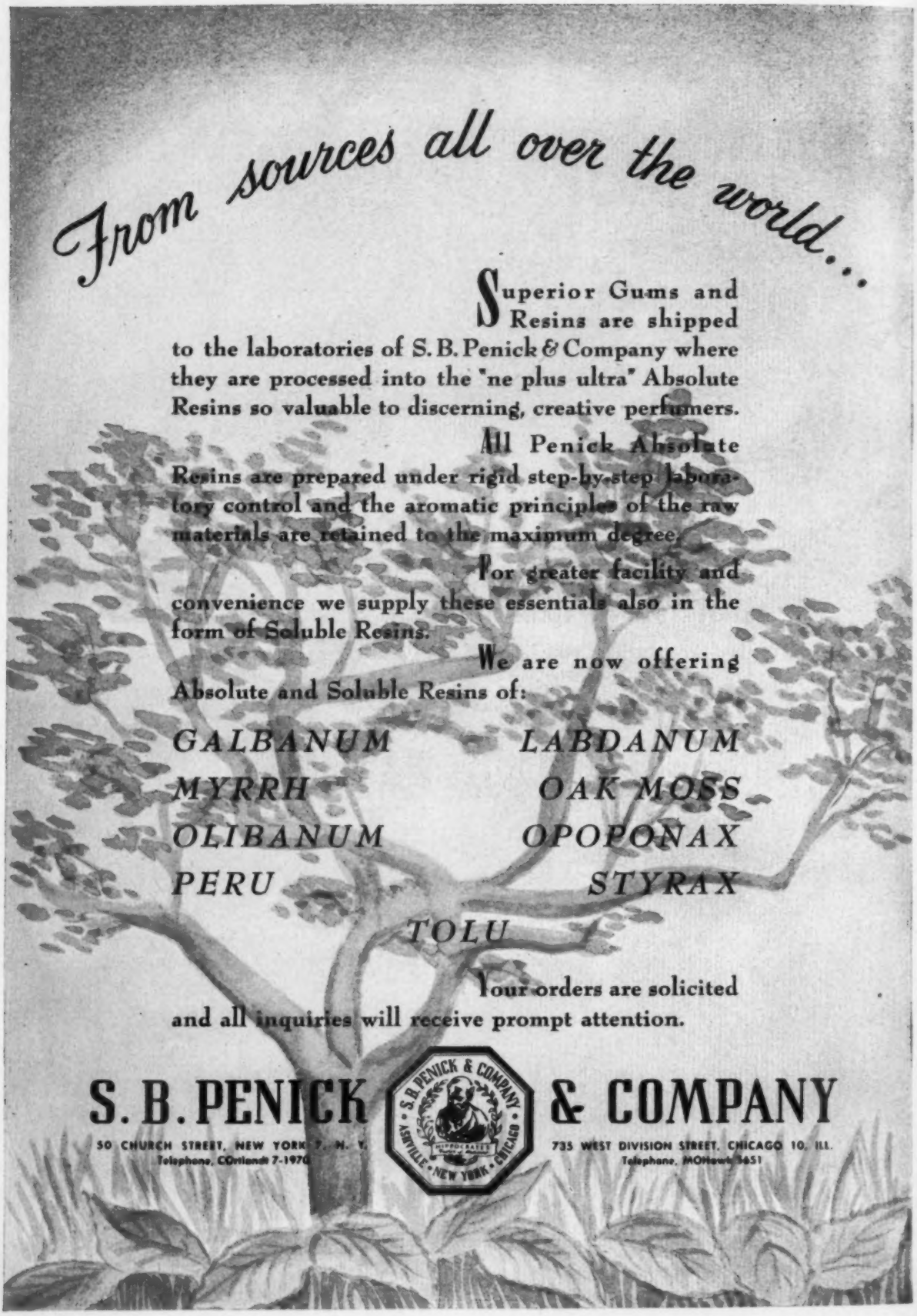
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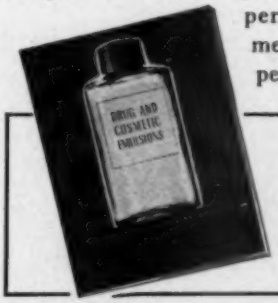

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KEEPING POSTED

Prices Sans OPA

WITH few outstanding exceptions, the removal of price ceilings from the raw materials consumed by this industry has no marked effect on prices. Raw materials made from natural crudes which are still very short throughout the world have advanced sharply. The two examples of this condition are alcohol, which has advanced 28½ cents per gallon in a free market, and glycerine, which has advanced 37 cents per pound. Another advance based upon the shortage of oils and fats, which brought about the advance in glycerine, is that in stearic acid and stearates. Bismuth and its salts are sharply higher due to the advance in the world-wide price of the metal. Iodine and iodides are higher as the result of an advance in crude iodine by the sellers of Chilean iodine.

Other advances were minor in nature and merely reflected the increased production costs resulting from higher wages for labor all along the line. In this category are acetanilid up 7 cents to a price of 41 cents a pound; coumarin up 50 cents a pound; vanillin up 65 cents a pound; carbon tetrachloride up ½ cent a pound. Solvents made from alcohol or from molasses or grains naturally advanced also. Zinc oxide naturally was higher by 1¾ cents per pound because of higher prices for the metal, and zinc stearate was 16 cents a pound higher because of higher metal costs and sharply higher stearic acid costs.

Because of the fact that medicinal chemicals generally were held down by price ceilings all during the war and some readjustments had to be made in a free market, our price index for medicinal chemicals shows a rise this month. However, our charts for botanicals and essential oils show declines for this month. These latter two groups of products have not been under price ceilings for quite a long time, and naturally the prices of these items have reflected the demand and supply conditions quite closely. Now with increasing supplies of natural raw materials arriving from all countries of the world, the prices for botanicals and essential oils are working down to levels that might be considered more close to normal.

As an outstanding example of improved supplies of imports of natural raw materials is the fact that all Chinese products are lower. A raw material that has long been considered by some in this industry a bell-wether of the markets for the raw materials of this industry—mercury—is working down to new low levels, and at the opening of December stood at $92 per flask—the lowest price registered since some time before the war.

Interesting Trade-mark Rulings

WHITEHALL Pharmacal Company recently sucsessfully opposed registration by Lederle Laboratories of a trade-mark "Synbefax" for a vitamin preparation because it was deemed confusing with Whitehall's mark for a vitamin preparation, "Benefax."

In another recent case before the Patent Office, registration was allowed for the mark "Trade Winds" for talcum powder, after-shave lotion, hair oil, and shampoo, despite the registration previously of a mark "South Wind" for identical goods. It was held that since the marks have different meanings and the meanings are not suggestive of the goods, sound and appearance would control, and there was not considered to be any likelihood of confusion.

German Cosmetic Data

INFORMATION on German formulas and process details of cosmetics and perfumes will soon be made available by the Office of Technical Services, Department of Commerce. Two reports of the findings of Dr. Stephen A. Karas, consulting chemist, who has spent five months in Germany as special investigator. One of the purposes of Dr. Karas' study was to obtain formulas for base waxes which American manufacturers imported from Germany before the war. He has returned with complete details of German processes and original formulas for making synthetic glyco waxes, for extracting cholesterol from wool fat, and for making many perfumes, toilet soaps, creams, and other cosmetic products based on these materials. Dr. Karas believes that the information which he has obtained will be of great value in making American cosmetic manufacturers independent of foreign manufacturers.

Evaluating N. F. Drugs

EXTREMELY interesting is the report of a Therapeutic Evaluation of National Formulary Drugs conducted by the Committee on National Formulary among twelve physicians. Six of these physicians were members of the Subcommittee on Pharmacology and Posology, of which Dr. H. B. Haag, who planned and conducted the survey is chairman. The other six physicians who were invited to participate consist of one from the A.M.A., one from a university dental school, and four from well known medical schools throughout the country. The results of the survey are quite startling. Drugs receiving 10 or more votes as "useful drugs" are:

Alcohol rubbing compound, aluminum acetate solution, ammonium chloride tablets, calamine liniment, calamine lotion phenolated, calcium phosphate tribasic, carbarsone tablets, carbon tetrachloride capsules, codeine, collodion salicylic, ephedrine hydrochloride tablets, ephedrine sulfate ampuls, ephedrine sulfate and phenobarbital capsules, ephedrine sulfate capsules, magnesium hydroxide, magnesium hydroxide tablets, mercury bichloride, mercury bichloride small poison tablets, potassium permanganate tablets, procaine hydrochloride ampuls, procaine hydrochloride tablets, quinine sulfate capsules, scopolamine hydrobromide tablets, serum human measles immune, sodium bicarbonate tablets, strophantin ampuls, terpin hydrate, terpin hydrate and codeine elixir, toothache drops N. F., zinc oxide paste.

Under the classification, "Not objectionable but adds to the multiplicity of drugs of similar use, ammonium bromide elixir drew 9 votes, ammonium iodide 8, ammonium salicylate 8, calcium bromide 10, cardamom spirit compound 8, cinchona alkaloids elixir 8, cod liver oil emulsion with malt 9, colchicum corm fluidextract 10, colchicum corm tincture strong 8, colchium seed 10, colchicum seed fluidextract 10, soda and mint solution 8.

Medical Science Reports

ONCE again the American Pharmaceutical Manufacturers' Association gathered together a most impressive list of outstanding men in the field of medicine to give first-hand information on what lies immediately ahead in this field. Progress in Fungus Disease Therapy was reported on by Dr. Louis Schwartz, Medical Director and Chief of Office of Dermatology, United States Public Health Service; Progress in Rickettsial Disease Therapy, by Dr. Andrew Yeomans, Associate Professor of Preventive Medicine in the School of Medicine, Johns Hopkins University; Progress in Allergy Therapy, by Dr. Samuel M. Feinberg, Associate Professor of Medicine and Chief of the Division of Allergy in the School of Medicine, Northwestern University; Progress in Hormone Therapy, by Dr. Edward H. Rynearson, Associate Professor of Medicine at the Mayo Foundation, University of Minnesota, and Consultant to the Division of Medicine, Mayo Clinic; Progress in Antibiotic Therapy, by Dr. Chester S. Keefer, Wade Professor of Medicine in the School of Medicine, Boston University.

These men delivered these papers at the Annual Award ceremony of the Association, which has now taken place eight times. This year the award was conferred upon the Mayo Foundation for Medical Education and Research. Previous recipients of this award are: 1939, Dr. Nathan B. Eddy and Dr. Lyndon F. Small for scientific studies of morphine derivatives; 1940, Dr. Perrin H. Long for scientific studies of sulfa drugs; 1941, Dr. Tom D. Spies for scientific studies of vitamin B complex; 1942, Dr. Edward A. Doisy for discovery and scientific studies in the hormone field; 1943, Dr. Alexander Fleming and Dr. Howard W. Florey for discovery and scientific studies of penicillin; 1944, National Research Council for medical research contributions in peace and war; 1945, Rockefeller Institute for Medical Research for broad research in the field of the medical sciences.

Another Anti-Malarial

A WAR time developed anti-malarial is now being marketed for general distribution. Chloroquine, first known as SN7618, the laboratory number given to it when it was under investigation by the National Research Council, is being marketed under the brand name Aralen by Winthrop Chemical Company. The product is being packaged in tubes of ten tablets at a list price of 73 cents; bottles of 100 tablets are priced at $6.25, and bottles of 1,000 at $47.92. Production is said to have been stepped up to a point sufficient to meet demands from malarial zones all over the world. The product was one of 14,000 different chemicals synthesized by Winthrop and turned over to the National Research Council for screening. It is said that subsequently the Council announced it as an important medical discovery describing it as a drug that effected cures usually in one day as compared to four or more days when Atabrine (quinacrine) or quinine was used.

Citronella Oil Duty Free

THE Customs Court of Appeals upheld the contention of Proctor & Gamble that citronella oil containing petroleum distillate (kerosene) as an adulterant, is a commercial citronella oil and not a compound, and therefore is entitled to admission duty free under the Tariff Act. The decision said in part:

"It is clear, of course, that sustaining the Government's position here would create an anomalous situation in citronella commerce—one which it is difficult to believe the Congress intended. The pure oil would be free but the diluted or adulterated product used for precisely the same purpose would be subjected to an extraordinarily heavy duty.

"Citronella oil is not competitive with any thing produced in the United States, but is valuable for use in important domestic industries, and ultimately to consumers. It is imported in large quantities as shown by the Summary of Tariff Information before us. It is readily understandable why Congress having no domestic citronella oil industry to protect was willing to forego the revenue which might have been collected upon it in order to favor those domestic industries which use it.

"If the addition of petrolleum distillate to citronella oil were shown to result in a product having a use different from the pure product, or, to be more exact, if it destroyed it as citronella oil and fitted it for only a perfume material a different situation would confront us, but, of course, no such result is shown nor do we apprehend that it could be.'"

The Problem of Retirement

DR. THEODORE G. KLUMPP, Winthrop Chemical Company President, told the American Public Health Association last month that compulsory retirement on a calendar age basis should be abandoned. "Society," said Dr. Klumpp, "has been quite illogical and inconsistent in its attitude toward the older worker. On the one hand, we have no objection to electing and appointing older individuals to positions of the greatest responsibility in government, business and the professions. And yet, as far as the rank and file of workers is concerned, we impose blind, and unselected compulsory retirement rules which automatically eliminate those in the ranks who have reached a certain age regardless of their fitness, ability and contribution to the group for which they labor." Mr. Klumpp made the point that since hiring is selective and based on fitness to do a given job, retirement should likewise be selective and based on unfitness. Another point which he made was that "if wage in proportion to performance is recognized as a fundamental principle, the older worker should taper off in industry, just as the young apprentice gradually works himself up in skill, performance and remuneration. In other words, opportunities for downgrading in position and salary should be offered." As to methods of compelling retirement, Dr. Klumpp said that "compulsory retirement should be based on the recommendation of a retirement board composed of medical and psychiatric members as well as administrative officials."

Night Club Business Off

ALTHOUGH the hotel room situation in New York was still just about as tight as ever in New York early this month, business in the night clubs and swank eating places had fallen off sharply. One of the swankiest eatings places was reported to have fallen off in business by fifty per cent. Owners said that this condition had existed for some three weeks and were inclined to blame it on the threat of, and the arrival of the coal strike.

Added Soda Ash Output

A STEP toward the eventual relief of the widely appreciated shortage of soda ash is being taken by the American Potash & Chemical Corporation, according to B. R. Armour, board chairman of the company, who announces that in early 1947, erection will be started on a plant at Trona, Texas, to produce 60,000 tons of soda ash and 30,000 tons of refined borax annually. The expansion, which will cost $4,500,000, will augment the company's present capacity of 82,000 tons of soda ash and 98,000 tons of borax produced in 1945. Therefore, the company's soda ash output will be increased by nearly 75 per cent, and its borax capacity by more than 30 per cent.

Fishbein and Libel

IN AN address delivered before the American Marketing Association in New York recently, Dr. Morris Fishbein, Editor of the Journal of the American Medical Association, spoke of Norman Baker, the cancer cure man, whom Dr. Fishbein attacked in the Journal. Said Dr. Fishbein:

"He made the great mistake of suing me for libel. I can give you some personal advice, and that is, never sue anybody for libel unless you are willing to quit business. I never sue anybody for libel. Other people sue me and then they quit business. Well, that is a different story.

"Altogether the whole libel technique is not a very sound method of perpetuating yourself, and Norman Baker ended up with four years in jail down in Arkansas. It was very unfortunate, frankly. If he had not sued me I think he could have gone on for some time."

We have always admired Dr. Fishbein's frankness, as in this case he openly declares himself to be fair game for the muckrakers who want to take pot shot at him.

Proprietary Association Sets Meeting

THE PROPRIETARY Association has apparently compromised the proposal to hold its annual meeting out of town at a resort hotel. Instead of going to a resort hotel isolated from everything else, the association is going to the Claridge Hotel, Atlantic City, on May 19, 20, and 21. Well, at least they are getting away from New York.

Digitalis To Go?

IN A publicity release that appears to be a "feeler" or "trial balloon" the Revision Committee of the U. S. P. asks, but does not answer the following question: "Will digitalis of the U. S. P. be deleted in favor of its several glycosides and join the ranks of nux vomica, ergot, spirit of ethyl nitrite, Blaud's pills, syrup of ferrous iodide, and others, at one time 'musts' for the U. S. P. but more recently discarded in favor of newer thoughts in therapy?" The release continues: "The very idea of giving up digitalis would have seemed preposterous only a few years ago, but when the U. S. P. Scope Subcommittee recognized Digitoxin, Digoxin, and Lanatocide C, crystalline glycosides of digitalis, for the U. S. P. XIII, they may have been sounding the death knell for digitalis itself."

Three-Year Penicillin

PENICILLIN is now being sold quite generally in the crystalline form which bears a three-year dating and does not require refrigeration. Prices are now quoted at $1.00 for 100,000 unit vials, $1.94 for 200,000 units vials, and $4.67 for 500,000 unit vials.

Goody—No Paper

WE, AND many other have long been crabbing about the paper shortage. However, there might be a bright side to the picture since Augustus E. Giegengack, head of the Government Printing Office, recently told an Atlantic City trade convention that the Government might not be able to obtain enough paper to print next year's income tax blanks!

The Glycerine Shortage

WITH glycerin prices now quoted at 55 cents by one maker and 70 cents by another, against an OPA ceiling price of 18 cents, manufacturers in this industry are being sorely squeezed. To make matters worse, the plant at which one of the manufacturers of propylene produces this substitute for glycerine, the workers recently went on strike. Welcome, therefore, is the announcement that the Shell Chemical Corporation will complete in 1948 its seven million dollar plant for the production of glycerine synthetically from propylene (from petroleum), chlorine, and caustic soda. While the squeeze in glycerine will continue either until this plant is completed or until the supply of fats is eased by, among other things, heavy imports of coconut oil from the Phillipines, it is good to know that the supply and demand situation in glycerine will be balanced in the not too distant future.

The real point in the erection of this plant is that the new heavy uses for glycerine as a result of war time developments clearly indicate that the usual sources of glycerine production would never be able to take care of the normal demands of the country. Therefore, it is essential that new sources be developed. With a synthetic production of this kind, plants can be erected until sufficient glycerine is at hand at a comparatively stable and reasonable price. Synthetic production of any product results in continually lower prices as consumption expands, while expansion of demand results in continually advancing prices of natural products.

Squeezing the Manufacturer

SPEAKING of manufacturers in this industry being squeezed by sharply higher prices for natural raw materials, one manufacturer of a well-known ointment containing methol, told us that his company receives 46.1 cents per tube for the product, and that at one time the value of the menthol contained in the product was slightly more than 20 cents. Not much margin for safe operation in situations of this kind. This manufacturer is fearful that he will have to advance prices on another of his products because of the high prices which he must pay for glycerine.

The Sugar Outlook

THE Sugar Committee of the Food Industry Council are urging Congress and the Federal Administration to take a firm stand against decontrol of sugar now and against any firm commitments on allocations of 1947 sugar supplies at this time. The Committee urges this in a 32-page analysis of the world situation on sugar supplies. The world sugar supply situation will improve in 1949, an improvement in European sugar production is foreseen for 1947, a small increase is probable in U. S. sugar production for 1947, but it does not appear that in 1948 there will be sufficient world production to bring stocks and supplies available for distribution up to prewar levels for the world. Members of the Committee sponsoring this report are: Chairman Edwin O. Blomquist, vice-president of B. J. Brach & Sons, Chicago; Talbot O. Freeman, vice-president Pepsi-Cola Company, New York; Ridgway Kennedy Jr., vice-president Abbott's Dairies, Philadelphia; and Ralph D. Ward, president Drake Bakeries, Brooklyn.

The Atom and Medicine

A TIMELY and interesting session on atomic energy was part of the Midyear meeting of the American Pharmaceutical Manufacturers' Association. Atomic Energy in the Physical Sciences was reported on by Dr. Samuel K. Allison, Director, Institute for Nuclear Studies at University of Chicago; General Medical Aspects of Atomic Energy, by Dr. Frank H. Krusen, Head of the Section on Physical Medicine, Mayo Foundation, University of Minnesota; Physiological Reactions to Radioactive Isotopes, by Dr. Shields Warren, Pathologist at New England Deaconess Hospital, and Assistant Professor of Pathology at Medical School, Harvard University; Use of Radioactive Isotopes by the Pharmaceutical Profession, by Dr. Paul C. Abersold, Chief, Isotopes Branch, Research Division, Manhattan District, Oak Ridge, Tenn., formerly with Radiation Laboratory of University of California; and Nuclear Physics and Medical Research, by Dr. G. Failla, Professor of Radiology and Director of Radiological Research Laboratory, Department of Radiology, at the College of Physicians and Surgeons, Columbia University.

Expansion of Lentheric

LENTHERIC, the perfume and cosmetic firm which was acquired by some principal owners of E. R. Squibb & Sons some nineteen years ago, and which has been located at the Savoy Plaza Hotel since 1928, is making its move since that time. The company has leased for a period of 21 years, with option to renew for another 21 years and to replace the building if desired, the seven story structure at 673 Fifth Avenue, the northeast corner of 53rd and Fifth Avenue, New York. The Lentheric Salon will eventually be moved from the Savoy Plaza Hotel to the first and second floors of the new quarters. George H. Sibley, well known in this industry, was attorney for Lentheric.

Science and Cosmetics

THE Scientific Section of the Toilet Goods Association has become very firmly established in the short space of about four years. If the sessions of the Section held early this month are any criterion, the scientists of the industry highly appreciate this forum from which they can obtain knowledge of the improvements in cosmetic raw materials; cosmetic actions and reactions upon the human body, and improved methods of formulation. For a very long time all cosmetic formulation and a large part of the raw materials used by numerous manufacturers was secret. Each manufacturer had his pet materials and he kept this information to himself. But as scientific information has spread and chemical manufacturers have developed new raw materials and have thoroughly investigated the application of these materials in cosmetics, information regarding them is being broadcast to all and sundry. This spread of scientific information regarding cosmetics and their formulation and manufacture is bound to react to the favor of this industry. The Toilet Goods Association is to be congratulated on developing a scientific section and bringing it to its present high level of interest. We hope that it will continue to grow.

Coty Demonstrators

LATE last month Coty, Inc., filed a brief answering the ruling of the Federal Trade Commission against the demonstrator practice used by Coty. Signed by Coty President Philip Cortney, the brief stated that Coty could not afford to dispense with demonstrators because it is necessary to educate the public "to a fuller and better appreciation of the merchandise offered for sale" in order to compete with other companies and to sell a diverse line of goods.

The brief further stated: "There is no doubt that the use of demonstrators is a practice which is partially responsible, as are other promotional activities, such as advertising, for the tremendous growth of our industry during the last 25 years; and that the results of having demonstrators has been not only to increase the business done by the department stores and specialty shops, but also to increase the cosmetic business done by drug stores."

The brief contends that Coty received valuable service from its payment of demonstrators. The claim is made that the law was aimed at disguised discounts, but did not intend to prohibit "a manufacturer from paying for services and facilities which a store may be willing and able to put at the disposal of the manufacturer."

Cortney tried to show with facts and figures, that demonstrators in a few stores boost sales for an entire trading area. A customer might make her first purchases from a demonstrator, but afterwards buy cosmetics from her neighborhood store. In support of this, Cortney used figures for 1931 to 1940, the percentage of Coty's sales to drug stores increased 9 per cent over sales to department stores (in 1940 Coty sold 68 per cent to drug stores).

As in the Arden case the FTC attorneys had held that it was "discrimination to pay clerks' salaries in unequal amounts to customers competing in the distribution of products, which amounts have no other basis or standard than the seller's discretion or favor." Such a standard, said the brief, did not apply to payments by Coty.

Explained Cortney, "What really happens is that we are constantly scanning all types of outlets where it seems to us that a demonstrator would accomplish the marketing policies of our firm. If and when we find stores which . . . can render a service that would benefit the marketing of our line in general . . . in all other outlets in the same trading area. We endeavor to convince such stores to make available to us services and facilities which would warrant our payment of a full or part-time demonstrator.

Direct Mail Leaders

SEVEN firms in this industry whose direct advertising campaigns for 1946 were named "Leaders" by the Direct Mail Advertising Association, are Abbott Laboratories, Ciba Pharmaceutical Products, Inc., Lederle Laboratories Division American Cyanamid Co., Schering Corporation, Sharp & Dohme, E. R. Squibb & Sons, and Upjohn. Ayerest, McKenna & Harrison, Ltd., Boyle & Company, and White Laboratories were on the winners' list and honorable mention was given the Dow Chemical Company, and Armstrong Cork Company.

Australian Perfume Expansion

THE Australian perfume industry, which hardly existed ten years ago, is moving into the ranks of the big five of the cosmetic trade in that country, despite the interruption caused by six years of war. Before the war almost no cosmetics were exported from the Commonwealth, but in the first nine months of peace, £750,000 ($2,437,500) worth, including perfumes, were exported to Malaya, India, Hongkong, Shanghai, Ceylon, and South Africa. The cosmetic industry is now regarded as one of Australia's secondary assets, and is growing fast. Already a French perfume syndicate of 1,100 members, employing 20,000 workers, has announced an all-out campaign for trade in the United States, South America, England, and Australia. Packages of essential oils from Europe are being flown to Australia. In all Australia there are probably not more than a dozen firms making perfume alone, most of them in Sydney. The entire cosmetic industry is limited to about sixty manufacturers.

To Learn of the Atom

TO THOSE who want an intelligent, particularly well done discussion of the splitting of the atom, its problems, its possibilities and its effects, we recommend that they obtain a copy of the "Monsanto Magazine" for December. Between the covers of this one issue is a vast amount of pertinent information on this all-important subject.

Tin

THE Civilian Production Administration will continue its order restricting the use of tin to manufacturers of food containers, certain pharmaceuticals and other essential products until March 31, 1947. The Can Manufacturers' Industry Advisory Committee has told CPA that control throughout 1947 over allocations was necessary to forestall a serious shortage of packaged goods.

CPA's power, however, to channel tin mill production to food container manufacturers lapses when the Second War Powers Act expires next March. The 1947 world tin supply is expected to total 141,600 tons, quite a bit below the predicted demand of 190,000 tons. CPA does not believe production will meet unrestricted demands until 1949.

For Crying Out Loud

DURING the National Chemical Exposition, held in Chicago recently, Arthur H. Downey, technical director for Magnus, Mabee & Reynard, Inc., New York essential oil house, unveiled a little item called "Atomic Onion". One pound of this potent commodity was said to be the flavoring equivalent of 4000 pounds of ordinary onion.

Luxury Item

THERE is a newcomer in the perfume field, who frankly admits an attempt to market the worlds most expensive perfume. Priced at $18.50 per dram, the scent is very aptly named "Macabre" because when the husband learns how much it cost he will probably drop dead. The package has an outer suede case that can later double as a jewel case. Presuming the family jewels weren't hocked to buy it in the first place.

F.T.C. CONFERENCE

A Fair Trade Practice Conference with the Federal Trade Commission is scheduled the early part of next year for the cosmetic and perfume manufacturers. This conference, which will set up rules for proper conduct of manufacturers under the laws which the Commission enforces, is part of the "New Work Plan" of the Commission. It will be recalled that the Commission was throwing its weight around quite a bit, and a comparatively short while ago there was introduced in Congress the Reece Bill which would have curtailed the power of the Commission quite a lot since, under the provisions of this bill, the courts would have had greater power to reverse orders of the Commission. The Commission was mortally afraid of the Reece Bill and fought it with everything that it had. However, a while back when a vacancy arose in the membership of the Commission, President Truman named to the Commission Lowell B. Mason. Commissioner Mason soon became famous for writing the majority decision of the Commission in the Canadian Ace Brand Ale case which decision allowed the manufacturer of the product to continue to use the word "Canadian" even though his product is not made in Canada. In this case Commissioner Freer (recently reappointed to the Comission by President Truman) and Commissioner Furgeson concurred.

In the decision in the Canadian Ace Brand Ale case Commissioner Mason wrote in part:

"Congress has given us the power . . . to seek out and stop all advertising that has the tendency and capacity to deceive.

"We are no moral Gargantuas, and consequently this feast of authority has at times been bad for the Commission's digestion. With the leavening of moderation lacking, we might stuff ourselves on the indigestible parsing, phrasing, and syntax of too much advertising language while many vital questions of fair dealings in business remain untasted on the table.

"All restraints . . . are taken by the Government in the name of protecting the public. The line between actual protection of the public and just plain 'busybodiness' has generally been made plain to the courts examining the impact of an injury to the public welfare, such as an injury to competition or the fraud upon a customer. These things can be seen as it were, with the naked eye, but since the Federal Trade Commission has been endowed by Congress with the power to protect the public from things which have the 'capacity' and 'tendency' to injure, the line between beneficial restraints and puritanical meddling have become hazy."

This clearly indicated at least a temporary change on the part of the Commission and many wondered if it were not brought about by the power behind the Reece Bill. Particularly was this change of heart strange for the reason that this decision of the Commission in the Canadian Ace Brand Ale case was a reversal by the Commission itself of a former decision which prohibited the manufacturer from using the word "Canadian" to describe this product.

However, Commissioner Mason apparently had the ear of President Truman and the Commission went to Congress to get an additional appropriation of $850,000 for a program of correcting unfair trade practices by covering entire industries at one time and thus putting everyone on an equal footing without having to single out certain manufacturers for individual citation. Congress did not give the Commission all that it wanted, but did appropriate $325,000 as a starter. Perhaps if Congress likes the activity of the Commission under the new plan, more money will be forthcoming. But Congress is going to watch this bureau closely to see whether or not this new plan aids business or hampers it still further.

It will be recalled by many in the industry that a Fair Trade Practices Conference with the Commission was held in New York some eleven years ago. These conferences were quite general at that time in various industries. However, at that time the conferences had to be requested by the industry or by some group representing the industry and the conference which was held was requested by the Toilet Goods Association. Under the new plan, the conferences are ordered by the Commission and all members of the industry being covered are invited to attend and to submit data.

Just how the new plan is going to work is problematical. Recently the Commission held its first conference under this plan with the manufacturers of household dyes. This industry uses some of the sales tactics used by cosmetic manufacturers such as demonstrators and P. M.'s And not only are the demonstrators in this industry the kind that give an actual demonstration of using these dyes in the home, but they are also the kind that merely aid in pushing certain makes of these dyes. Because of the fact that this was the first conference of this sort, and also because of the similarity in merchandising methods between the household dye indus-

LOWELL B. MASON

try and the cosmetic industry, three officials of the Toilet Goods Association attended this conference. These officials are: Herman L. Brooks, honorary chairman of the board of the Toilet Goods Association; Paul H. Douglas, president of the Toilet Goods Association; and S. L. Mayham, executive vice-president of the Toilet Goods Association. These men freely admit that they have no standing so far as a conference ordered by the Commission is concerned, but they thought that by attending the conference with the household dye industry they might obtain some information and opinions which would be of benefit to the Toilet Goods Association and to other manufacturers of cosmetics.

The three men were most favorably impressed with the attitude of Commissioner Mason and with the method in which the conference was conducted. Therefore, they are heartily in favor of cooperating to the ultimate extent with the Commission in making the conference of the cosmetic industry a success. The operation of the plan, as they describe it, calls for a preliminary conference, then an interim period of twenty days during which time interested manufacturers can supply all sorts of information to the Commission, and then a final conference. Particularly, were these men impressed with the knowledge of the household dye industry displayed by Commissioner Mason. Evidently the Commissioner had made a real study of the industry and knew what everyone was talking about. This was quite different, they said, from the conferences of years ago when the Commissioner conducting the conference came into the conference "cold turkey" with practically no knowledge of the industry involved.

"How satisfactory this new plan will be," said Mr. Douglas, "it would take a bold man to say." However he expressed the opinion, which was concurred in by Mr. Brooks and Mr. Mayham, that nothing would be lost and a great deal might be gained by everyone in the industry entering the conference in a spirit of cooperation with the Commission. All three men were of the confirmed opinion that from all appearances the Commission is anxious to cooperate with business in a fair manner. Mr. Mayham expressed the opinion that out of these conferences there would come rules that really fitted each particular industry and not the old style of "boiler-plate" rules that came out of the conferences of years ago.

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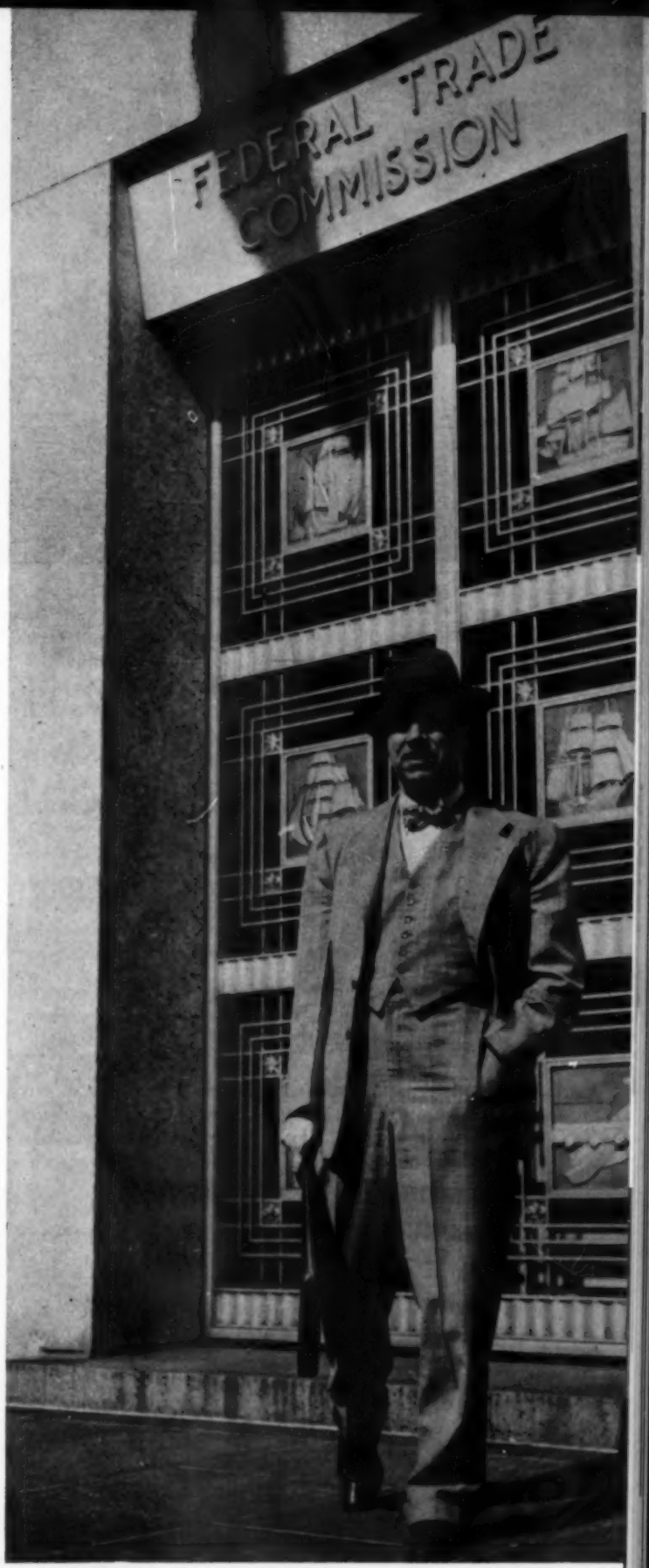

HARRIS AND EWING

A Speech Course for Pharmaceutical Representatives

BERT TODD*

From the beginning Ortho Pharmaceutical Corporation has always believed in above-average speech for its representatives . . . For speech is the switchboard through which we plug in on the other fellow's personality. If our speech is clear and pleasant, our relations with him are made easier. If poor, barriers are likely to be reared. Thus, a representative who speaks well not only enhances his personality but reflects favorably upon his company as well.

More recently, in addition to maintaining relatively high standards of speech in the selection of personnel, we have added a speech course to the training program of our representatives. This article attempts to describe, in some detail, the kind of speech instruction given our representatives.

The course covers twelve class meetings and is taught by a speech expert of The National Institute for Human Relations in New York City. We engaged that organization to study the specific needs of our representatives in regard to speech and then prepare a syllabus for use in the course.

In the beginning, there is a voice recording to provide each member of the class with the opportunity to hear himself as his clientele hears him. It seems that we cannot hear ourselves as others hear us because of the way our hearing mechanism functions. When a person speacks, he hears his own voice mainly by way of bone conduction; when he hears the voice of another (or his recorded voice), the sound is conducted chiefly by air waves. Result is: the same voice conducted by bone and air is interpreted differently in the hearing centers of the brain. That is why almost everyone exclaims upon hearing his voice recorded for the first time, "Why, that doesn't sound like me!"

Then the representative listens to his recording a number of times, all the while filling out a self-appraisal questionnaire. The objective is to guide him in determining what he likes and what he dislikes about his speech and voice. Shortly thereafter, he meets the instructor in private conference and is given a speech examination, covering both oral reading and extemporized speaking. The reason for this is two-fold: certain speech habits are sometimes reflected in one activity and not the other; we feel that our representatives should be able to read aloud reasonably well. During the examination dialectal differences, if any, are noted by the examiner along with type of voice quality, rate of speaking, phrasing, pausing, modulation, articulation, pronounciation, etc. At this time the instructor's

*Vice-President, Ortho Pharmaceutical Corporation.

estimate and the representative's self-appraisal questionnaire results are compared, and a program of specific objectives agreed upon.

Another session is devoted to the extremely important aspect of speech—listening. Here a 4-c audiometer examination is given and also a test of auditory memory span. Exercises are given each member of the class in what the instructor calls *dynamic listening*. We agree that a first-rate representative is as good a listener as a speaker, and one of the tabooed questions is "What did you say?" (or, its cousin from the other side of the tracks, "Wha-ja-say?"), particularly if it is habitual. When hearing losses are uncovered, compensations are provided. One of the tests used in the course, "Do's & Dont's of The Sales Interview"† lists the ten most frequently met hearing disabilities among salesmen and states that approximately 2 per cent of all American salesmen have hearing anomalies that contribute to sales resistance.

Pronunciation is another important topic covered. The representatives review 2,000 words commonly mispronounced by salesmen and take a pronunciation test included in "Salesmen's Mispronunciations." Moreover, they study a glossary of some 1,300 technical terms, based on the general recommendations contained in "NBC Handbook of Pronunciation," and prepared from the descriptive and experimental literature in that field of pharmaceutics we are privileged to serve. By the end of the course they are expected to know and to use the preferred pronunciations of such terms as *gynecology, endocrine, fecundity, amino, syndrome, rationale, etc.*

But good speech is something more than these things: it is idiom devoid of crudities of expression. Each time a representative speaks in class and makes errors of grammar, they are noted on the instructor's appraisal sheet, and he is refrered to the expression and its correct form in "Salesmen's Errors of Grammar." While we do not want our representatives to become stilted in expression or lose the friendly contact made possible by good colloquial usage, we don't want them to use double negatives or similar solecisms. Our representatives serve members of two highly educated professions—medicine and pharmacy, and should mind their grammar accordingly.

Vocabulary or word knowledge is also emphasized. Class members are provided with *The Bender Vocabulary Tests, Form B* so that they may compare their results with the norms of 14 or 15 other vocational groups, and if lacking, set about a course of vocabulary building. For we hope that our representatives will continue their interest in speech improvement after they leave the course. Words are the tools of thought, and a speaker who selects words so as to influence his audience ordinarily is indeed persuasive. A large vocabulary also provides one with a feeling of assurance when listening to highly educated people.

From time to time our representatives are asked to address sales meetings of wholesale druggists, and other groups. That is why the course includes some exercises in public speaking. Emphasis is put upon extempore speaking, posture, gestures, voice projection, etc. Much interest is evinced in this work since it is a kind of

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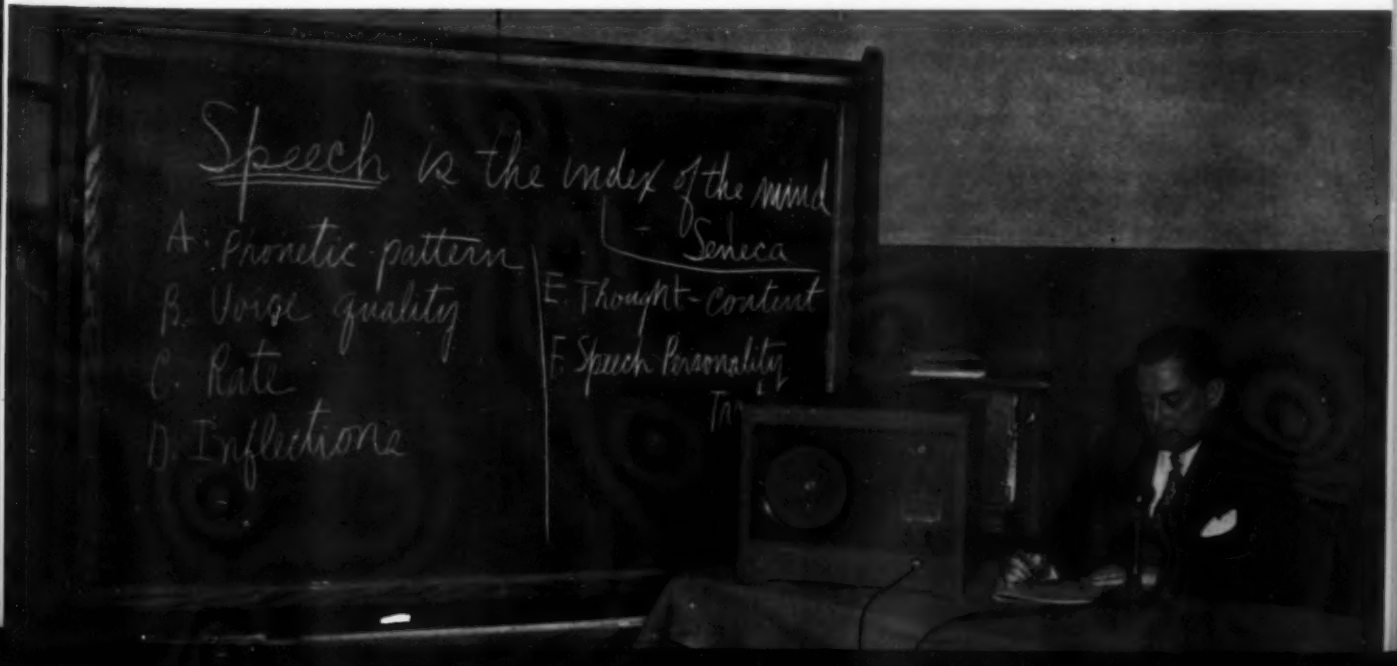
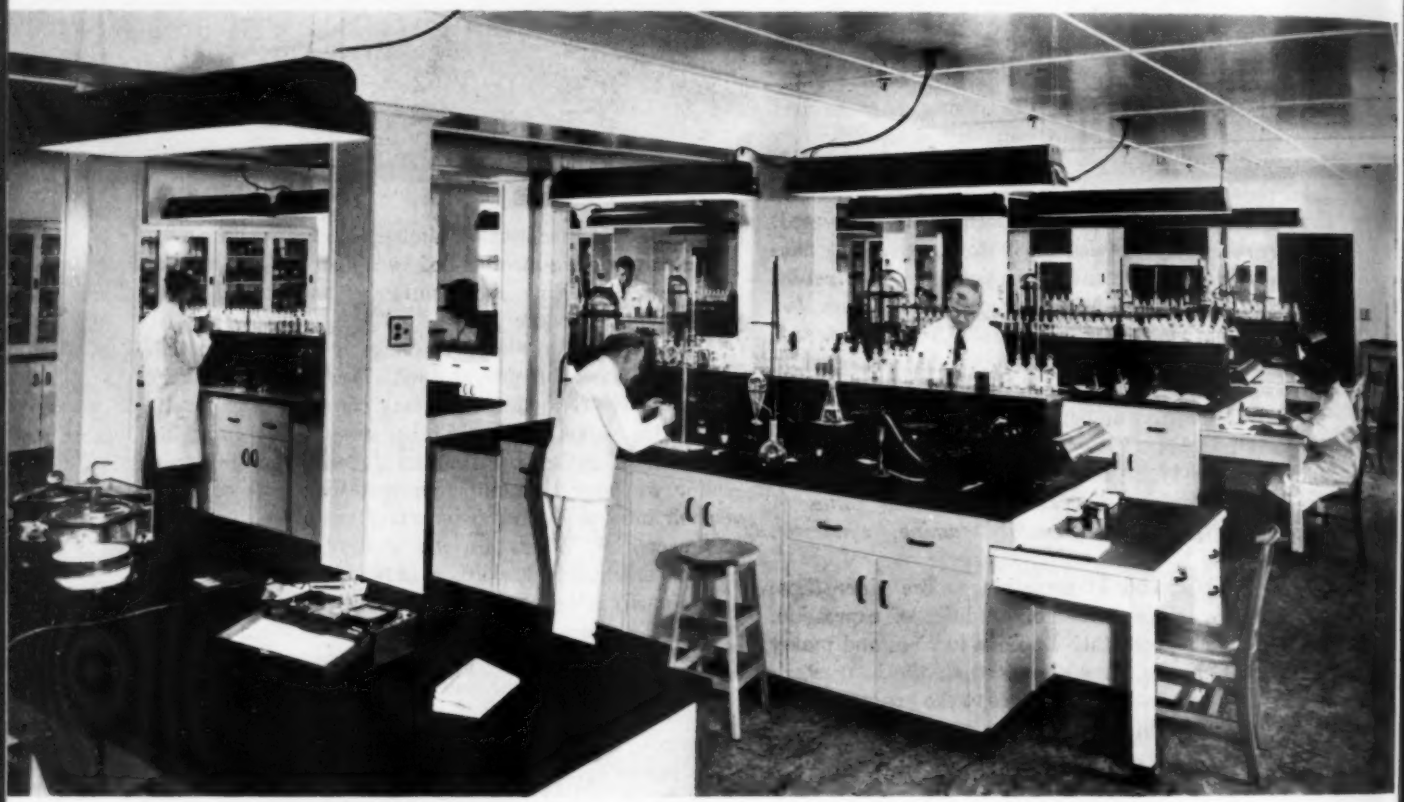
†This text and the others used in the course are published by Sales Training Publishing Company of Roslyn Heights, New York.



As a result of work done about half a century ago, the scientific world had become quite convinced that the air was not particularly important as a means for transmitting contagious diseases. Unfortunately, the application of sanitary principles, so successful in controlling some diseases, was not quite as effective against respiratory infections. It was not until the subject was again studied from new angles and with new technics that scientists began to realize that air-borne organisms could play a major part in the transmission of respiratory diseases in confined spaces.



Completely air-conditioned laboratory at Frederick Stearns & Co., Detroit.

Until recently it was thought that the respiratory diseases were spread from person to person only by physical contact with a sick individual or with objects contaminated by him, or by droplets of sputum sprayed a short distance by coughing or sneezing. During the last decade, however, studies on air-borne infection have profoundly changed modern concepts of disease transmission. From these investigations it became evident that the danger from an infected droplet coughed or sneezed out by a sick person did not stop when the droplet dried out. Rather, it was found that the bacteria in it could survive for long periods of time in the air, in dust, and on clothing, bedding or other fabrics. Accumulating evidence indicates that the air serves as a medium for transmitting such conditions as measles, chickenpox, streptococcal infection, the "common cold," and other diseases. This evidence has stressed the importance of developing practical methods for air sterilization.[1]

The necessity for such development is also emphasized in the observation by Harris[2] that perhaps the greatest problem today in the fight against epidemic disease is the spread of respiratory infections. Such infections are increasing each year. Statistics for the years 1933 to 1943 have shown a steadily mounting rate of absenteeism in industry due to respiratory diseases.[3] Mudd[4] has suggested that the causes of this increasing industrial disability due to respiratory diseases are to be sought in overcrowding of workers in ill ventilated trains, street cars and busses, rather than in the conditions in industry alone. He calculated that for the year 1943 there was lost to industry in this country through respiratory diseases over 220,000,000 person-days, or more than one-third of the total number of person-days lost to industry by disability. This represents a waste of labor of about 740,000 persons working for a year. What this means in lost production and earnings is almost impossible to calculate.

In order to prove that the air is a medium for transmitting disease and to determine the efficacy of methods for sterlizing the air, it was first necessary to devise new and more efficient methods for determining the bacterial population of the air, especially that of enclosed

or living spaces. It is now possible to obtain such information in a relatively short time and under control conditions through the use of various recently developed air sampling devices.[5,6] As a rule, several methods must be used to obtain a complete picture. On the basis of their own rather extensive experience, Du Buy and Hollaender[7] suggest that this is best achieved through the combined use of three devices, namely: the open plate, a representative of the atomizing methods, and one of the impinging methods.

The data provided by such sampling methods have shown the great importance of eliminating air-borne cross-infection wherever people gather. Armed with facts, scientists have attacked the problem of air sterilization along three main lines. Weapons against air borne infections bacteria include the use of germicidal vapors, the employment of ultra violet irradiation, and the application of dust-suppressing oils and emulsions.

AIR STERILIZATION

By M. A. LESSER

Much of the early work on germicidal aerosols or vapors has already been reviewed in this publication.[8] The spraying of germicides into the air was of course a part of antiseptic surgical technic. Lister, for instance, used a carbolic and spray in the operating room in order to prevent infection from air-borne contaminants. Such procedures, however, were abandoned in favor of other aseptic precautions, and were not revived until fairly recently. Today it is realized that certain factors must be considered in selecting a material for use as a germicidal vapor. Aside from the primary requisite of effective bactericidal action, it must be non-toxic, non-odorous and without harmful effects on metals, furniture and clothing. Thus, a number of materials which seemed quite promising have since been discarded as being impractical, too irritating, or insufficiently bactericidal.[9]

In England, considerations of economy and practicability, as well as of efficacy, have served to focus attention on the germicidal value of hypochlorites and hypochlorous acid. American workers, exploring the possibilities of continuous air disinfection, found that certain glycols, notably propylene glycol and triethylene glycol, offered considerable promise.[4]

In 1941, Robertson and his associates[10] reported that propylene glycol vapor, in very small concentrations, was effective against a number of dangerous micro-organisms, including influenza A virus. Two years later another important advance was made when it was found that triethylene glycol acted in the same way as propylene glycol but in concentrations that were about one-fiftieth as great.[11] These workers also showed that the germicidal action depended, not upon collision of fluid droplets with air-borne bacteria, as previously supposed, but upon condensation of the hygroscopic glycol molecule upon air-borne, bacteria-containing droplets.

A number of practical studies have demonstrated the usefulness of these two glycols against air-borne organisms. One of the most significant is the three-year investigation carried on by Harris and Stokes[12] in the words of a children's convalescent home. Use of propylene glycol vapors and, later, of triethylene glycol vapors resulted in a marked reduction in the number of respiratory infections occurring in the treated wards. Thus, in the untreated, control wards 132 infections occurred during the course of the three winters, while only 13 such infections appeared in the glycol-treated wards. Under the conditions of their tests, as noted in an earlier report,[12] propylene glycol caused a reduction of 71 per cent, and triethylene glycol a reduction of 97 per cent in the total number of air-borne bacteria.

Another study[14] on the intermittent dispersal of propylene glycol into the air of a crowded room showed a reduction of 80 per cent in the total bacterial content of the atmosphere. This lasted for only about fifteen minutes, but repeated dispersals of glycol vapors every fifteen minutes resulted in a quite constant lowering of the air-borne bacteria numbers.

A study[15] of the effect of triethylene glycol vapor on the incendence of respiratory diseases in military barracks has brought out some interesting facts. During the first three weeks after new personnel entered the glycolized areas, the disease rate remained about the same as in the control barracks. During the second three-week period, however, a 64 per cent reduction in acute respiratory diseases was attained in the glycol-treated barracks. A small epidemic of mumps occurred in the barracks during the period of the glycol vaporization tests. For the first three weeks, the number of hospital admissions for mumps was the same from the

test and the control groups. After that period there were only four cases from the test barracks and 14 from the untreated controls. It is pointed out that glycol vaporization in these studies was used only in the sleeping quarters and did not prevent the spread of infection in mess halls, classrooms and elsewhere.

The amounts of glycol required to produce a germicidal atmosphere are so small that relatively large spaces could be treated at low cost. For example, a concentration of 1 cc. of triethylene glycol vaporized into 10,000 cubic feet of air causes almost immediate death of pneumococci, streptococci and influenza virus previously dispersed into the test room.[16] Bactericidal activity occurs in large spaces as well as small test chambers. Concentrations of 0.2 mg. per liter of air of propylene glycol and 0.005 mg. per liter are necessary for immediate killing of air-borne micro-organisms. However, smaller concentrations may suffice to control air-borne disease.[17]

The relative humidity and the temperature of the air are important elements in the efficacy of glycol vapors. Maintenance of a relative humidity of between 35 to 50 per cent yields best results, but at higher humidities (75 per cent or more), the air cannot hold enough glycol to be of any value. Low temperatures enhance the action of glycol vapors, while high temperatures depress their effectiveness. Bactericidal action is greater below 72° F. than above this temperature.[1]

Propylene and triethylene glycols are relatively nontoxic and in vapor form are odorless, tasteless and nonirritating to the respiratory mucosa.[18] In the concentration required for air sterilization, their vapors present no fire or explosive hazard.[19] The vapors are without effect upon fabrics. The vapor of propylene glycol produces tackiness on certain varnishes, but this effect has not been observed with triethylene glycol.[1]

Although various methods for vaporizing glycols may be employed in experimental work,[1] general utility of these materials was delayed because of lack of practical vaporizing equipment and the need for automatic control of the concentration of glycol vapor in the atmosphere. Suitable types of glycol vaporizes have been developed recently[4, 20, 21] and an apparatus called a "glycostat" has been devised for regulating the amount of glycol vapor in the air.[22] Vaporizer units are now available in sizes ranging from small table-type models for home and office use to large cabinet size models for hospital, factories and other large premises.[9] Of pertinent interest is the suggestion[23] that the liquefied gas method, familiar through the use of insecticidal aerosol "bombs," might also be applicable for producing germicidal vapors. Preliminary tests indicated that the method has good potentialities.

As already mentioned, European workers have concentrated largely on the use of hypochlorite mists for disinfecting the air,[4, 8, 24, 25] Hypochlorous acid gas is generally believed to be the active germicide in hypochlorite spraying. While this vapor has a marked bactericidal action, Robertson[26] points out that it requires a high relative humidity for its optimum effect and that it also exerts a corrosive action on many metals. He believes that its usefulness would seem to be limited to crowded spaces where there is little ventilation and presumably a high relative humidity.

Occasionally, during the last few years, other substances have been suggested for use as air sterilizing vapors. One British research team[27] has noted promising results from vaporized lactic acid. Iodine has also received attention. Raymond[28] has cited some work with iodine vapor that is quite indicative of its possibilities as an air disinfectant. Over a period of years, iodine vapor has proved quite effective for air disinfection in certain English busses.[29]

The application of ultraviolet radiation for disinfection in controlling air-borne cross-infection has already found fairly wide use in schools, children's wards and hospital operating rooms.[30] The ultraviolet rays which are most suitable for killing bacteria in the air are those with a wave length of 2,537A (angstroms). Ultraviolet ray disinfection is particularly useful where large volumes of air enter and leave an inclosed space, because of the speedy lethal effect of the rays on bacteria.[3] It has been demonstrated[31] that a 30-watt germicidal ultraviolet lamp, installed in the center of a 4,000 cubic feet room and so baffled that only the upper half is irradiated, will kill air-borne bacteria at a rate equivalent to 100 complete changes of air per hour.

It is noteworthy that the Council on Physical Therapy of the American Medical Association[32] has found ultraviolet lamps acceptable as adjuvants in air disinfection. Commercially available burners and fixtures of several types have been approved for use in operating rooms, in hospital wards and in nurseries. However, the Council feels that the use of ultraviolet radiation for disinfecting air in industrial plants, barracks, school rooms, assembly halls, refrigerators, and the like, is outside of its province.

In an acceptance of one such device, the Council[32] stressed that in order to have effective disinfection of air by ultraviolet radiation, it is necessary that a sufficient number of properly placed lamps be installed. Adequate ventilation is also a requisite because dust-laden air provides protection for air-borne micro-organisms against ultraviolet radiation.

From the standpoint of both safety and efficiency, certain precautions are essential in the installation and use of germicidal ultraviolet lamps. Direct rays are capable of injury to the eyes and to the skin; causing conjunctivitis and erythema. Another disadvantage is the need for the rays to strike droplet or bacteria directly if there is to be disinfectant action. Opaque objects, ordinary glass, dust particles and other materials block the action of ultraviolet rays. Then, too, like all other rays, the intensity of effect falls off with an increase in the distance from the source. Recognition of these limitations is evident in the design of acceptable air sterilizing ultraviolet lamps and ceiling fixtures. Properly placed shields protect the occupants of a room from harmful radiation. If the proper number of fix-

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MELVIN C. EATON

A Drug Is Not Born in a Bottle

A LITTLE over a year ago the Norwich Pharmacal Company announced the formation of its wholly owned subsidiary, Eaton Laboratories. Much comment and no little conjecture was heard about the kind of products Norwich's "ethical" offspring would market. After the unveiling it was quickly apparent that Eaton Laboratories was going to be a specialty house. The man who helped formulate this policy is Melvin C. Eaton, president of Norwich and long-time leader in the drug industry.

It was by no mere accident that genial Mel Eaton entered the drug business. He was born in Norwich, New York, in 1891, the son of Robert Eaton who was in the feed and grain business, but also had an interest in the Norwich Pharmacal Company. At that time, Norwich employed only ten salesmen who spent their time selling the usual tablets and tinctures of the day. Through Mr. Eaton's astute business and financial guidance, the company increased its capital to $100,000, hired Richard Stofer, a topflight chemist, and moved into enlarged quarters.

Mr. Stofer was given the job of turning Norwich's almost forgotten "Jeffery's Universal Family Ointment" into an up-to-date, physician-acceptable product. He soon made formula improvements and changed the name to "Unguentine"—from the Latin word "unguentum" meaning ointment. Dry surgical dressings or powders had been used almost exclusively by physicians up to that time. Unguentine was the first ointment put on the market as a surgical dressing type of pharmaceutical preparation and the word "Unguentine" made it easy for the doctors to know by its name the character of the new product.

Advertisements were placed in medical journals featuring Unguentine as "an antiseptic surgical dressing" and appealing to druggists through the trade publications to stock Unguentine because of its acceptance by physicians and surgeons.

The sales of Unguentine soon spiraled upward and it has maintained its popularity ever since.

In 1906 Mr. Stofer succeeded Oscar Bell as President of Norwich. During Stofer's term in office (1906-1920) the company's capitalization was increased to $1,000,000, new buildings were constructed and machinery purchased. Many new products were developed and sold throughout the United States and several foreign countries. It was during the Stofer regime that some of Norwich's most important products including Unguentine, Pepto-Bismol and Unguentine Rectal Cones were developed.

After Mr. Stofer's death in 1920 the vice-president in charge of sales, W. G. Peckham, was elected president. It was at this time that Melvin C. Eaton was selected as assistant general manager, assistant treasurer and assistant secretary.

Mel Eaton first joined Norwich during the summer of 1912-13 while he was still in school. Upon completing college in 1914, he became a full-time employee serving in various capacities in the production control end of the business. His career in the drug industry was interrupted temporarily by World War I when he served with the U. S. Army in France.

Upon returning to his business career, Mr. Eaton became a member of that far-sighted group in the drug industry who saw the futility of carrying a large number of products most of which were non-profit items. During the presidency of Mr. Peckham, Norwich cut its list

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CHARLES PHELPS CUSHING

Foreign Botanicals*

By JOHN P. SNYDER and JOHN M. SNYDER

It is most important at this time that all manufacturers of medicinal preparations consider carefully the existing situation with botanical drugs since probably difficulties in obtaining an adequate supply will be encountered for some little time. The cause is due to the botanicals, particularly those imported from Europe, being contaminated with filth and infested with insects.

During the six months preceding November 1st of this year, there were detained at the port of New York 154 different shipments due to this cause, representing 1,013 short tons or 2,026,000 pounds of botanicals. This does not mean the entire amount was never used in this country but it does mean all such drugs were refused entry into the United States until such a time as they were freed from such contamination.

No dealer in botanicals desires to supply drugs contaminated with filth and no manufacturer desires to use them. Moreover, one thing is certain, the Food and Drug Administration will continue to prevent the use of any such contaminated botanicals in the preparation of foods and drugs. Food and Drug officials are to be highly commended for their zeal in effectively enforcing their program against such contaminated botanicals. The very idea of the use of filth in the manufacture of foods and drugs is repulsive to any right thinking person.

The solution to the problem is therefore not through any relaxation of government officials in their enforcement program but through a development of ways and means whereby such contaminants may be prevented from getting into the material in the first place. Towards this end every branch of the industry should work and can be assured of the support and assistance in every way possible of government officials.

It will probably not be amiss at this time to consider the particular section of the Act under which the government officials are proceeding as well as the specifications in the U. S. Pharmacopoeia and National Formulary. Under Chapter 5 of the Act, Drugs and Devices, there is the following:

"Adulterated Drugs and Devices"

"Sect. 501. A drug or device shall be deemed to be adulterated—

(a) (1) If it consists in whole or in part of any filthy, putrid or decomposed substance. (2) If it has been prepared, packed, or held under insanitary conditions whereby it may have been contaminated with fifth, or whereby it may have been rendered injurious to health."

The U. S. Pharmacopoeia recognized authority under the Food, Drug and Cosmetic Act, contains this statement.

"Vegetable and animal drugs are to be substantially free from insects or other animal life, extraneous animal material, or animal excreta. They are to be free from moldiness, abnormal odor, or sliminess and show no substantial discoloration, or deterioration due to any cause.

"For the protection of vegetable or animal substancies from the ravages of insects, it is directed in special cases that they be preserved in suitable containers into which is introduced at intervals a suitable quantity of chloroform, carbon tetrachloride or other suitable fumigant.

"In commerce it is not always possible to obtain vegetable drugs in a state of absolute purity, and a limited amount of innocuous, extraneous or foreign material adhering to the drug or admixed with it is usually not detrimental. The presence or admixture of any poisonous, dangerous, or noxious foreign substance, however, is not permissible. Foreign organic matter refers to any part of the plant or plants yielding the drug, except that part or those parts designated as constituting the drug, and to any other plant parts, vegetable tissues or substances.

"In order that vegetable drugs be of uniform quality and as free as practicable from foreign substances it is required that in each vegetable drug recognized in this Pharmacopoeia the amount of foreign inorganic matter, estimated as acid insoluble ash, be not more than 2 per cent of the weight of the drug unless otherwise specified in the monograph of the drug, and that the amount of foreign organic matter be restricted to the allowable percentage specified in the monograph of the drug. Before vegetable drugs are ground or powdered, all lumps of dirt or other foreign inorganic matter which can be separated by mechanical means must be removed."

The National Formulary, also a recognized authority under the Food, Drug and Cosmetic Act contains this statement.

"Vegetable and animal drugs are to be as free as practicable from molds, insects, or other animal life and animal excreta. They shall show no abnormal discoloration, abnormal odor, sliminess or evidence of deterioration."

There has been comment from time to time to the effect the Food and Drug Administration in its enforcement program against such contaminated botanicals simply considers the Act requires a drug to be considered adulterated if it consists of any filthy, putrid or decomposed substance and fails to consider the requirement of the compendiums—vegetable drugs are to be, "substantially free" or "free as practicable" from insects or other animal life, animal material or animal excreta.

When careful study is given to the statements in the U.S.P. and N.F. it will be found they in no way set up standards whereby such contaminated materials may be used in the United States. Congress in delegating its authority to the compendium to set up legal specifications for drugs requires them to create such specifications in conformity to the Act. It is believed the U.S.P.

(*Continued on page 866*)

*Scientific Committee, Proprietary Association

MODERN DEODORANTS

By I. W. GROTE* and PEGGY WALKER*

A THOROUGH understanding of modern deodorants, as well as any cosmetic for the skin requires at least a superficial understanding of the skin and its functions.

The skin essentially is composed of two parts, the epidermis and the dermis. The epidermis has an outer layer of horny-like protein cells, which are the residue of the once living inner layers. This horny layer is impervious to water, wide ranges of acid and base and to most micro-organisms. Underneath this are layers of living tissue and again underneath are several layers making up the dermis. The whole ranges from 1/16 to 1/8 inch thick.

The skin normally serves the body in a number of ways, not only by the protection it affords by the impervious horny outer layer, but also through regulation of body temperature, elimination of waste and lubrication of the surface, all of which it accomplishes by means of skin glands, of which there are three types—eccrine, apocrine, and sebaceous. The individual glands are anatomically divided into body and excretory duct. The body consists of the complicated windings of a single or rarely, a branched tube which is made up of a single row of rather flat columnar epithelial cells. The bases of the secreting cells rests on a compact layer of involuntary muscle and the glandular portion is surrounded by a dense vascular network and is richly supplied by nerves which activate both the secreting cells and the muscle element.[1]

Eccrine glands are small coil glands, developing directly from the epidermis. They function from infancy and are very numerous, about 100 per square cm. average, or some 2,000,000 over the surface of the body. They are most densely distributed on the palms, soles and forehead. They produce and excrete a fluid without any loss of protoplasmic substance.[2] Their secretion varies from 600 cc to several liters a day. Their chief functions are regulators of temperature by secretion of water and the excretion of lactic acid, urea, sodium chloride, glucose, other mineral salts and nitrogenous compounds.

Eccrine sweat is approximately 99% water and 1% solids. The chemical composition varies with the individual, the region of the body and with the rate of sweating.[3] It has a higher sodium chloride content and higher osmotic pressure than apocrine sweat.

"Thermal" sweating is chiefly through the eccrine glands and results from an increase of body temperature. "Mental Sweating" is usually through palms, soles, and axilla and is a reflex to certain psychological states.[3]

Apocrine glands are larger and coarser than eccrine glands and extend into subcutaneous tissue. Like the sebaceous glands they are practically always connected with a hair follicle. They are ordinarily located in the axilla or underarm and groin and do not function until maturity of the sex glands. It has been noticed that apocrine glands enlarge and excrete more actively at the time of menstruation and in pregnancy. Although often termed part of the secondary sex characters due to their obvious close association, they are not found to diminish either in number or in secretion in old age.[2] It is estimated that there are a total of 9000 sweat glands in the underarm areas.[4] In these glands, there appears to

* The Chattanooga Medicine Co.
Delivered at Scientific Committee, Proprietary Association.

be an actual loss of protoplasmic substance occurring when the secreting cell, in the act of secreting, ruptures. For this reason, apocrine sweat contains fats and protein in addition to the ordinary components of eccrine sweat. The body areas containing apocrine glands have a higher pH than the other areas of the body, having a range of 5-7 in contrast to the eccrine areas where it is 3.5 to 5.0.[2]

Lubrication of the skin surface is accomplished by both the apocrine and sebaceous glands but predominately the latter. These keep the skin surface supple and pliant by the secretion of an emulsion containing olein and palmitin and varying amounts of fatty esters of partially oxidized cholesterol as well as long and short chain fatty acids with their esters and soaps. Bacteriocidal activity is claimed for some of these constituents.[5]

The sebaceous glands are active even before birth in the manufacture and secretion of the cheese-like substance called vernix-caseosa which covers the newborn infant. They are almost inactive in children, but become especially active again at puberty, causing in many cases a pimply skin which is alomst a characteristic of many adolescents.

Sweat glands are comparable to the salivary and mammary glands in producing a uniform secretion. It is primarily independent of the chemical conditions in the body.[6] The sweat glands show a high secretory pressure, much higher than the blood pressure of the parts where they are[7] The secretory activity of the sweat glands is under the control of nerves.

Eccrine and sebaceous secretion of normal individuals has only a slight odor characteristic of the individual, the family, or the race and normally play little or no part in bromidrosis or development of unpleasant perspiration odors. Odor development must be mostly ascribed to apocrine sweat.[1]

Persistant odors are more noticeable and more pungent in the darker than in the lighter races—witness Negroes, Syrians and Armenians, due presumably to a larger number of sweat glands of the apocrine type. However Chinese and Japanese seemingly have fewer glands. In Negroes, the frequency of bromidrosis or unpleasant perspiration odor may run as high as 40% depending to some extent upon climate. In whites, the frequency varies between 6 to 10%.[1]

Similarity of axillary, that is, underarm, body odors is noticeable among members of the same family. Prevalence of disagreeable odor is distributed equally between blondes and brunettes. Body odor depends partially on inherent factors in the individual and his race and in addition may be caused by ingestion of certain foods and medicaments, which by physiologic action impart odor to secretions. Certain bacteria may also be responsible, especially bacillus fecalis.[1]

In normal persons, however, any unpleasant perspiration odor is due to putrefaction of the organic residue of sweat by bacteria which may be from 4 to 6 hours after bathing.[4]

Lactic acid of the perspiration may be transformed by bacterial action into acetic, propionic, butyric, valeric, capryllic and caproic acids. Amines and sulfur compounds are also formed from other constituents. Formation of body odor may therefore be normally largely prevented by use of an antiseptic, neutralizer, or absorbent, which prevents development of unpleasant odor. This type of cosmetic does not prevent damage to garments by moisture, however, and is less desirable than the antiperspirant type. This "deodorant type" as contrasted to the "antiperspirant" type will not be discussed in this paper.

Partial inhibition of the sweat glands throughout the body is a medical measure occasionally employed to diminish hyperidrosis or excessive sweating. This may be done by the administration of drugs like atropine, adrenalin and ephedrine which inactivate the sweat glands by systemic action.

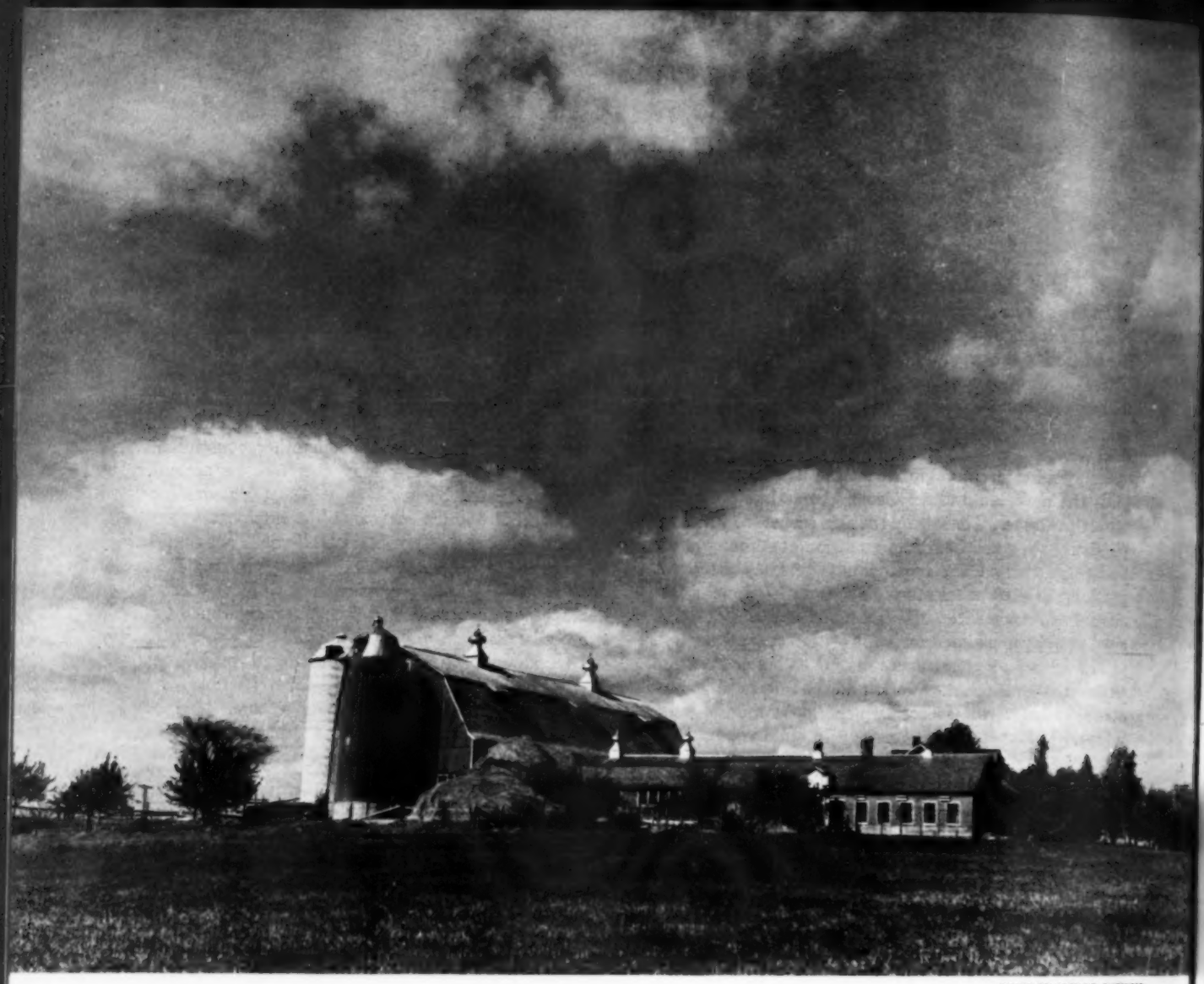
However, perspiration inhibitors of the cosmetic class depend upon local inhibition by contact in the areas where control of moisture and odor is most desirable, such as the underarm areas and the feet. Such local inhibition of sweating is not in any way dangerous, per se.

The inhibition of the sweat glands of these and other areas is most easily accomplished by the action of astringents. Most pharmacologists define astringents as any group of substances which cause contraction of the skin with consequent "closing of the pores." Cold water dashed on the skin will cause constriction of the pore-openings and thereby stop perspiration for a short while. A less transient effect is produced by the local application of alcohol which causes constriction, not only by its cooling effect but also by temporarily coagulating the albuminous components of the skin.

More lasting astringent effect is produced by the use of chemical astringents. The precipitation of tissue protein by these agents causes swelling of the sweat glands, thereby blocking the openings and restricting the flow of perspiration. They may also act as antiseptics.

"Puckering" of the mouth is probably a more reliable indication of the value of an astringent than measurement of its protein precipitating power.[8] The astringent action of salts increases with molecular weight of the metal ion and decreases with molecular weight of the acid ion and is directly proportional to the degree of ionization and rate of diffusion of the salt. Unfortunately a high degree of astringency may have corrosive

(*Continued on page 872*)



CHARLES PHELPS CUSHING

THE FARM MARKET

By WILLIAM T. DOYLE

DRUG and cosmetic manufacturers have shown considerable interest in the farm market. The drug industry appreciates the importance of the animal health market while the cosmetic people are acutely aware of the keen interest of rural women in better grooming.

In 1939 a survey estimated that of the $81,508,527 of veterinary products sold that year only 10.1 per cent went through the drug store. In 1944 the same study revealed sales of $105,309,000 with 25.8 per cent going through the drug store. Apparently the trend is toward a closer relationship between the druggist, farmer, veterinarian and county agent.

A careful study conducted under the auspices of The National Association of Retail Druggists and the *Saturday Evening Post* disclosed: "The sale of animal health remedies, while not bulking large in the total sales for all stores, offers a very healthy increment to the volume of those stores handling this type of merchandise. The usual store offering this merchandise for sale finds 5 per cent of its total volume coming from these items. The unusual store that finds it opportune

to feature this department may do as much as 40 per cent of total volume in these items. It is not at all uncommon to find this department accounting for over 10 per cent of total volume, for 19.9 per cent of all stores located in cities of less than 20,000 reported these items accounting for more than 10 per cent of all sales. Even among stores located in cities larger than 20,000 some merchants find a good market for these items. The sale of these items is apparently more dependent upon the size of the town than the volume of business done . . ." (See table.)

The U. S. Department of Agriculture has reported that agriculture as an industry has increased from a $49,000,000,000 business to a $74,000,000,000 business during the five years ending January 1, 1945. During 1944 alone the increase was from $69,000,000,000 to $74,000,000,000. The increases in the valuation of physical assets used in agriculture are due mainly to higher prices and also in part to increased quantities. The higher prices which were noted at the beginning of 1945 yielded higher annual incomes especially where land and dairy herds were involved. Thus the increase in financial assets is a result of a combination of continued high net income and restrictions placed on the purchases of many goods.

It would seem safe to conclude from the foregoing that the outlook for the future development of the drug store Animal Health Department is excellent. Farm assets, both physical and financial, were at new highs at the beginning of 1945. Debts were at a new low.

A recent talk by Lloyd Partain of the Curtis Publishing Company's commercial research department brought out some interesting points regarding the farmer's income and buying habits.

As we noted earlier the American farmer is in a better financial position than he has ever been before. Mr. Partain confirms this and adds that . . . "unlike the World War I period, the farmer has cut his mortgage debt sharply, repaid about all his personal loans, has pretty well avoided land speculation, and has salted away some 16 billion dollars in cash, war bonds, and other savings."

Mr. Partain's study revealed that for the first time since before the 30's farm operating expenses were less than half of his income. Said the Curtis commercial research man: "Spendable farm income for 1945 is estimated at about 25.4 billion dollars. Operating expenses, which include repairs and taxes, amounted to about 9.6 billion. Family living expenses amounted to around 8.4 billion—more than total farm income in depression years. Adding operating and living expenses, we find the farmer has about 6 billion dollars left over in cold, or as the anti-inflation folks say, hot cash."

Mr. Partain's thoroughly informative report underscored the farmer as a great market. With the farmer in a liquid state it is not difficult to appreciate his desire to buy consumer goods. The farmer, and particularly the farmer's wife, offer unlimited sales opportunities for the alert advertiser. Of particular interest to the cosmetic industry is a report from *Country Gentleman*, a national farm magazine, showing the number of farm women who took time out to write for the following free cosmetic literature: 98,771 Skin Care and Make-up; (Skin Care, 70,146; Make-Up, 28,625). (Note that skin care is of the greatest importance to rural women who have to do so much outside work and chores); 88,982 Hair Styles and Hair Care; 88,253 Grooming and Personal Daintiness; 55,604 Hand Care.

It is obvious that farm women are cosmetic-minded.

Rural Marketing recently pointed out that "In towns of less than 20,000 population we find more than half of the retail stores and nearly 40 per cent of the nation's retail sales. Towns of 5,000 or less thave 40 per cent of the stores, do 23 per cent of the total retail business, most of it with farmers living outside of the town. There is some indication that small towns are recapturing a large part of the style market they once had." Mr. Nelson Miller, Chief of Distribution, Bureau of Foreign & Domestic Commerce, of the U. S. Department of Commerce, said recently: "In the first place, the small town merchant whether he is in the food business, the appliance business, or the apparel business, is not large enough, as a rule, to afford the luxury of his private labels. The mail order houses and large department stores can do this. But the small town merchant finds his best opportunity in the field of well-known brands, brands that mean as much to his customers, and usually more, than the private labels of giant merchandising corporations. He can't sport such labels as Saks Fifth Avenue, Marshall Field, or Macy's, but he can feature such labels as Arrow, Manhattan, Del Monte, General Electric, Westinghouse, and he does very well with them."

We certainly agree with Curtis Partain when he said, "that a fairly well established distribution pattern awaits many lines of consumer items . . wanted by farm families. These people are definitely on the threshold on a higher plane of living."

PER CENT OF TOTAL VOLUME DONE IN FARM ANIMAL REMEDIES
Stores Grouped by City Size

	Total		*Cities Less than 20,000*		*Cities 20,000 & over*		*Unspecified*	
	No.	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*
Stores selling	488	100.0	377	100.0	82	100.0	29	100.0
5% and under	263	53.9	193	51.2	56	68.2	14	48.3
6%-10%	140	28.7	109	28.9	18	22.0	13	44.7
11%-15%	48	9.8	46	12.2	1	1.2	1	3.5
16%-20%	23	4.7	19	5.0	3	3.7	1	3.3
21% and over	14	2.9	10	2.7	4	4.9	..	..

Progress in

ANTIBIOTIC THERAPY

By CHESTER S. KEEFER, M.D.

AN ANTIBIOTIC agent has been defined in several ways. The term antibiotic is derived from the word antibiosis which means an association between two or more organisms which is detrimental to one of them. One definition might read, "an antibiotic agent is a chemical substance of microbial origin that is capable of inhibiting the growth or the metabolic activity of bacteria." Antibiotic agents have been derived from a variety of microorganisms including yeasts, fungi, molds, algae, and bacteria. Some have also been derived from plants. While most of these antagonistic agents have been studied most extensively for their effect on bacteria, there is good evidence to suggest that some agents exist that have an antagonistic effect on the growth of viruses, fungi, and tumor cells. At the present time we should not be too rigid in our definitions of these agents.

The history of antibiotic agents really began with the fundamental studies of Pasteur in his classical work on the antagonistic effects of bacteria and their products on the anthrax bacillus. The significance of these important observations was appreciated by bacteriologists during the latter part of the 19th century and many studies were made in an attempt to isolate antibiotics. Two such agents were isolated—pyocyanine and prodigiosin. Because of their toxicity and other undesirable properties, neither of these agents was useful as a therapeutic agent. One of the greatest stumbling blocks in the past has been to discover substances which were effective as antibacterial agents and relatively nontoxic for tissue cells. The same difficulty exists today. Another difficulty has been the isolation of these nontoxic antibacterial substances in sufficient quantities for adequate testing.

Renewed interest in this vital subject was aroused by the announcement of Dubos that he had obtained the antibiotic agent tyrothricin from cultures of *Bacillus brevis*. While this agent has only a limited therapeutic use, its discovery served as a powerful stimulus to science and medicine since it brought into focus the wonderful potentialties of antibiotic substances. Intensive research on penicillin and other antibiotics was resumed some years after they had been discovered. The results of this reaserch are well known to all of you.

We should not forget that five years ago today (December, 1941) there was not enough penicillin in this country to treat a single patient with any disease. Today the production has reached a staggering figure.

For this achievement, your industry deserves the highest praise. Without the expenditure of large sums of capital, and without the utilization of your research, engineering and production facilities and a wholehearted willingness to produce something for the benefit of your fellow man, penicillin and other antibiotic agents would not be available to us today.

What are the benefits which have flowed from the use of antibiotic agents? They are so numerous that one can only list some of them. In staphylococcic infections of a serious character the fatality rate with bacteremia without penicillin was 80 to 85 per cent. Today it is 25 per cent. The death rate is highest in people who have endocarditis, or some other serious infection such as meningitis. When one considers those staphylococcus infections in certain locations of the body in which death was the rule, such as in cavernous sinus thrombosis or in mediastinitis, and realizes that now 70 to 85 per cent of patients survive, it is remarkable indeed. Staphylococcal abscess in all locations including the brain, the epidural space, the peritoneum, the joints, the pleura, the lungs, the bones, the subcutaneous tissues, all yield in a remarkable manner. The 3800 cases of Staphlococcic infection that Dr. Anderson and I have studied yield excellence evidence of the striking effects of penicillin in this large and important group of infections.

In hemolytic streptococcal infections which resisted the action of the sulfonamides, the results were equally impressive. Instead of 80 per cent of patients dying as is usual in this group of cases with bacteremia—80 per cent now survive. Patients with pneumonia, meningitis, and endocarditis account for most of the failures—although with infections in these areas, the results are very striking.

In pneumococcic infections, the results are equally impressive. The fatality rate in pneumonia is now less than 5 per cent. Most of the deaths from pneumococcic infection today are due to either meningitis or pneumonia in elderly people, often with complicating diseases.

In non-hemolytic streptococcal infections exclusive of

*Read before Midyear Meeting of the American Pharmaceutical Manufacturers' Association.

Scraping spore of streptomyces griseus from culture for preparation of inoculum at Merck Research Laboratories, Rahway, N. J.

bacterial endocarditis and in anaerobic streptococcal infections, the end results have been striking indeed with recovery rates in the neighborhood of 70 and 60 per cent respectively

The results in gonorrhea and syphilis continue to be outstanding, and there is no reason to believe that these diseases cannot be controlled by penicillin alone if treatment is started early in the course of the disease.

In the treatment of bacterial endocarditis the results continue to improve. In the cases due to the nonhemolytic streptococcus, the rate of recovery continues in the neighborhood of 60 to 70 per cent. When the infection is due to the staphylococcus it is only 10 per cent, with the penumococcus 25 per cent and with the hemolytic streptococcus 50 per cent.

Patients with pyogenic meningitis now survive in greater numbers than ever before. In pneumococcic meningitis 60 per cent live; in staphylococcic meningitis 70 per cent survive, and in nonhemolytic streptococcic meningitis and in hemolytic streptococcic meningitis, the survival rate is 66 to 70 per cent.

Other diseases which are less common have not attracted so much attention, but it is well to say something about them. At least 50 per cent of patients with infections associated with agranulocytosis now recover with penicillin, and 80 per cent of patients with actinomycosis are either greatly improved or recover following its use. All patients with anthrax recover promptly. Seventy-five per cent of patients with gas gangrene recover, and 90 per cent of patients with rat bite fever. Eighty-five per cent of patients with mediastinitis now survive, when usually 98 per cent died. Seventy per cent of patients with cavernous sinus thrombosis survive. And so it goes.

As a prophylactic agent in wounds and burns and in thoracic surgery, penicillin has proved its value. The prevention of bacteremia following tooth extraction is another valuable use for penicillin, as is the treatment of fusospirochetal disease of the mouth and lungs.

When one sums up all the things that penicillin has accomplished, it is no wonder that it has been called the most remarkable chemotherapeutic agent of all time.

But this is not all—what about streptomycin? In this antibiotic, we have the most effective agent against all types of tularemia. The death rate is reduced and the total duration of the disease is shortened. In gram negative bacillary infections with bacteremia, the fatality rate is reduced from 60 per cent to 10 per cent. In influenza bacillus meningitis the fatality rate is reduced from 98 per cent to 30 per cent, and it is extremely effective against sulfonamide-resistant, streptomycin-sensitive organisms infecting the urinary tract. We know that it has a powerful effect on the tubercle bacillus, but the results in human tuberculosis cannot be accurately assessed at present.

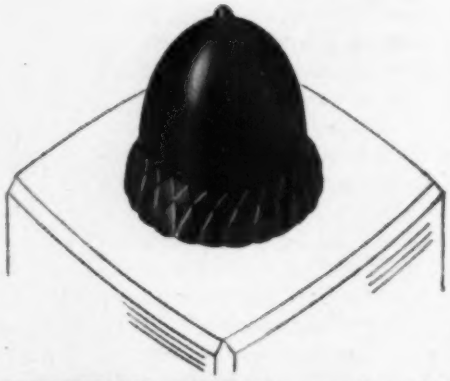
Here, then, are a few of the diseases that are controlled in an extraordinary fashion by antibiotic agents.

(Continued on page 875)

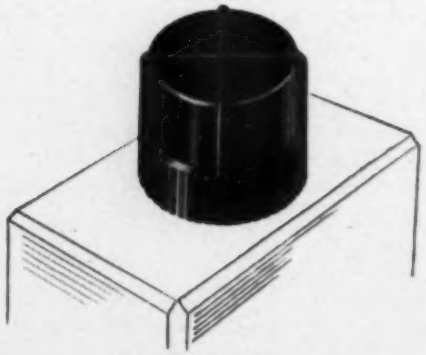
Ideas for individualizing your private mold caps

YOUR NAME is the center of attraction on this distinctive Artmold Cap. Filled in with color and surrounded by a decorative "bulls-eye" pattern, your name gets and holds customers' attention.

DIGNITY AND BEAUTY are the keynotes of this highly individualized cameo-design Artmold Cap. Designs like this help make more sales for "luxury trade" items, attract discriminating buyers.



SYMMETRICAL ACORN is one of a wide variety of individualized designs available on Artmold Caps. Lend sales-building dignity and eye appeal to your package with your own personal design.



THE STYLE of your cap can accentuate the lines of your container. An Artmold Cap can make it look taller, shorter, modern, "period," and otherwise add to the appearance and salability of your package.

THE EXTRA STYLE, beauty, and distinction of an Armstrong's Molded Cap will give your packages an "edge" in the competitive selling days just ahead. Get design suggestions now. Send a sample or drawing of your package to Armstrong Cork Co., Glass and Closure Division, 3812 Prince Street, Lancaster, Pa.

ARMSTRONG'S *Artmold* PLASTIC **CAPS**

Packaging and Selling

The Inventory Bugaboo

It would almost seem as if we would have to use the word hysteria to describe what has been taking place in the retail trade, and particularly in the larger stores in their buying policy.

This hysteria started early in the Fall and reached a peak toward the end of November. The abrupt change in attitude toward inventory by store management has been giving buyers, as well as manufacturers, one of the worst headaches they have had for many years.

The word which came down from upstairs, varied somewhat from store to store, but whatever the words were, they were set to the same music. Some buyers received word to cancel all undelivered orders across the board, or to cancel everything not delivered by a certain date, or to cut all orders over a certain amount in half, or to ship back a lot of goods. The buyer was rarely given any discretion or selection in the matter, and this is really a curious and interesting thing.

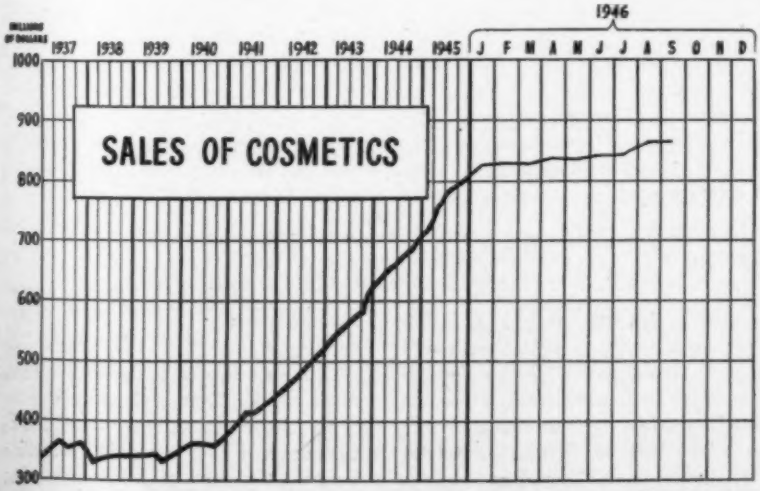
We have heard a great deal over the last twenty years about the great improvement in department store management. A number of expensive surveys have been made. During this period, the controller has become one of the two or three chief management executives with a very large staff to keep him informed of every detail in store operation. The merchandise manager has acquired a large staff, which includes statisticians and clerical workers, who give him the figures and the charts, which will visualize for him, at any moment, the status of the operation of the departments under his supervision.

This is not an attempt to criticize leading stores for cutting down their inventory. These men are top flight retail merchants. They have proved their excellence of judgment in the success of their vast retail enterprises, and they unquestionably had good and sufficient reasons for paring their investment in inventory. They also had good and sufficient reasons for getting rid of a great deal of wartime merchandise, in which they lack confidence, as quickly as possible.

But why in the name of good business judgment, good retailing and immediately available statistics did they have to make the broad sweep with very little discrimination between the established lines, which have long proved themselves money makers for the store, and the lines with a big question mark at the front and back of them. That is why the word hysteria seems to apply.

Every manufacturer's salesmen have a story to tell, which makes a fantastic record. One will tell you about a gift set that happened to hit the ball this year, and about a large store that sold all twelve sets ordered, during the first week in which they were displayed. Although this took place in the last week of November, the store refused to reorder. Another representing a well established line was told by the buyer he could not reorder those items in which they were sold out, although he had told the merchandise manager that customers were asking for them in the department. The manager's answer was, "Well, sell something else you have in stock." Another will tell you of the frantic clamor on the part of a store to get some merchandise delivered by air at the very time that merchandise was half way across the country on its way back to the manufacturer as a return goods shipment from that store. This record could go on for pages.

The net substance, is, unless every cosmetic salesman in the country has suddenly gone in for tall stories, that both the cosmetic and perfume manufacturers and the retail stores have lost business during this critical season, which was not only unnecessary, but which on the record, if they had taken



Retail sales of cosmetics for the twelve months ended with September 1946 totaled $863,474,000. This compares with $863,257,000 for the twelve months ended with August and with $791,800,000 for the twelve months ended with September 1945.

time to study it, would have shown that it was unbusinesslike.

Right at this moment, we are trying to visualize just how some buyers and merchandise managers must feel about the returned goods and their cancellations of early deliveries for standard, established lines, and good selling gift items if the coal strike and the embargo on freight and express shipments extends another week.

Cosmetics in Russia

In the October issue of the *Woman's Home Companion*, there was an interesting article by Oriana Atkinson entitled "My Life Behind the Iron Curtain" a fascinating account of the various aspects of Russian life a visitor is shown in Russia. Mrs. Atkinson had some revealing comments in regard to the use of cosmetics by the Russian women.

While few women there use cosmetics, feeling that such bourgeois frivolity has no place in their scheme life, and as workers, efforts in the advancement of their country subordinate any personal adornment.

But there are girls no less patriotic than their sisters that have grown tired of living for years in a country where life is one long monotone and of looking and feeling always drab and unglamorous. It is proof that all women have an ingrained longing for cosmetics and personal beauty. Like their sisters all over the world they want cosmetics to give them a lift and enhance their appearance.

This need for beauty preparations has been recognized by the Soviet Government with the creation of the Cosmetics Trust. And with the release of ingredients from war priorities, more and more cosmetic products are on sale. All the standard items are to be had—face powder, lipsticks, cold creams, mascara, rouge, perfume, bath oil, scented soaps, etc., with appropriate revolutionary sounding names such as Red Moscow, New Dawn and Red Poppy.

As for the perfumes, all the scents are pleasant but the lasting qualities are poor. Nail lacquer is in great demand, but the type on the market is of inferior grade and chips easily.

All cosmetics are made by the Cosmetics Trust without competing manufacturers. They are sold in commercial stores as well as in workers shops. There are even some luxurious shops dealing exclusively in cosmetics. But the method of selling or promoting the merchandise would drive an American sales manager crazy. The saleswomen in these establishments seem strangely unconcerned over the movement of the stock from the shelves. "The stuff is there," they seem to imply. "If you want it buy it," nobody tries to break down your sales resistance or extols the virtues of the wares.

The Cosmetic Trend

A fact that manufacturers of cosmetics, anxious to bring their prices in better relation to their cost of production, can not afford to neglect is that more important to the cosmetic counter than the price levels of individual articles is the need to maintain the habitual price ranges of the assortment. Buyers, more or less justifiedly, proceed on the theory that the cost to the consumer of any advertised or well-known article is a matter between the manufacturer and the customer. If the price of the item should appear too high to the purchaser she can leave it alone without any real injury to the counter as she will, most probably, turn to another more acceptably priced.

The price of the various "layers" of the assortment, however, is determined by the paying ability of the largest number of the customers of the store. Counter attendance suffers if the buyer can not maintain satisfactory price levels across the assortment. These levels have been established over a number of years and, in many cases, they constitute the principal appeal of the counter that separates it from other stores. To abandon them now, at a time when customers are more price conscious than during the war years, would not be only bad merchandising but endanger the success of the counter for the future.

Manufacturers, therefore, can expect that, if they themselves are not in the position of giving the stores the type of article which it needs to carry through its established merchandising policies at the prices that are required for that purpose, store buyers will simply be compelled to deal with other producers; however pleasant the relation may be with the current connection.

Such a change-over may not be essentially a debacle for the manufacturer of well established brands, because it is not likely to occur in many cases, and, if it should, the additional revenue will be full compensation probably for the loss of customers where it takes place. But it may be a very serious matter for the manufacturer whose products have sold on a price basis within established assortment levels.

What these levels are, and can be, is of course largely a matter of store position, location and regional distribution. However, the store which has favored, for an example, group levels at 38 cts, 57 cts, 89 cts, etc. will persist to buy for sale within these price groups, even if for the sake of filling his wants and giving customers what they expect he may have to forego quality for the time being. That does not say that merchandising pressure will go exclusively behind the lines that can fill the bill. It makes it likely, though, that the manufacturer who can deliver within these price levels stands a better chance to maintain the connection than the one who can not or will not—and, there is little doubt that there is a wide open field for promotion of new items to take the place of those that may have to be discarded.

As a matter of fact, most buyers feel that, even if there should be a wide upward adjustment of prices in the near future, they will not have much trouble filling in with suitable merchandise, excepting in the very low priced variety store lines where labor costs, more than materials, will ultimately force a revision. The majority of stores is not interested in this type of merchandise and it is more often only carried to meet the Five and Ten competition than as an income factor.

Fountainhead

Fountainhead Inc., has come out with a new line of bath oil and bath foam ranging from a 4 ounce size at $1.25 to a 16 ounce size for $3.50. Packaged in an acetate jacket an interesting innovation also developed is a measuring cup and bottle cap combination that makes it no longer necessary to use a spoon or any other inconvenient device,

High on "Eye-Catching" quality...

CARTONS OF COATED LITHWITE*

This revolutionary clay-coated paperboard, plus Gardner-Richardson carton craftsmanship, means *stand-out* packages on the shelf

SOMETHING happened seven years ago when Gardner-Richardson introduced *Coated* Lithwite. For the first time clay-coated paperboard became a *packaging possibility for mass merchandisers.* Why? *Coated* Lithwite was the first *clay-coated* paperboard ever made in *one* straight-through operation. Since then, billions of cartons of *Coated* Lithwite have whisked across the nation's shelves—*smart, colorful cartons produced in Gardner-Richardson's exacting plants.*

Why does *Coated* Lithwite add *quality*-appeal to your package? Because this finer board has a satin-smooth *chalkless* surface that's free from "hills and valleys." Takes plate impressions uniformly. Holds up inks with vivid brilliance. *Coated* Lithwite is rub-resisting, fade-resisting—easier to glue. And, when combined with Gardner-Richardson's carton craftsmanship, it produces packages that really *sing* on a shelf!

If you are a mass-producer of packaged goods, it will pay you to investigate the possibilities of *Coated* Lithwite against the day when Gardner-Richardson can book additional business.

More eyes reach for your product in

Cartons of Coated Lithwite

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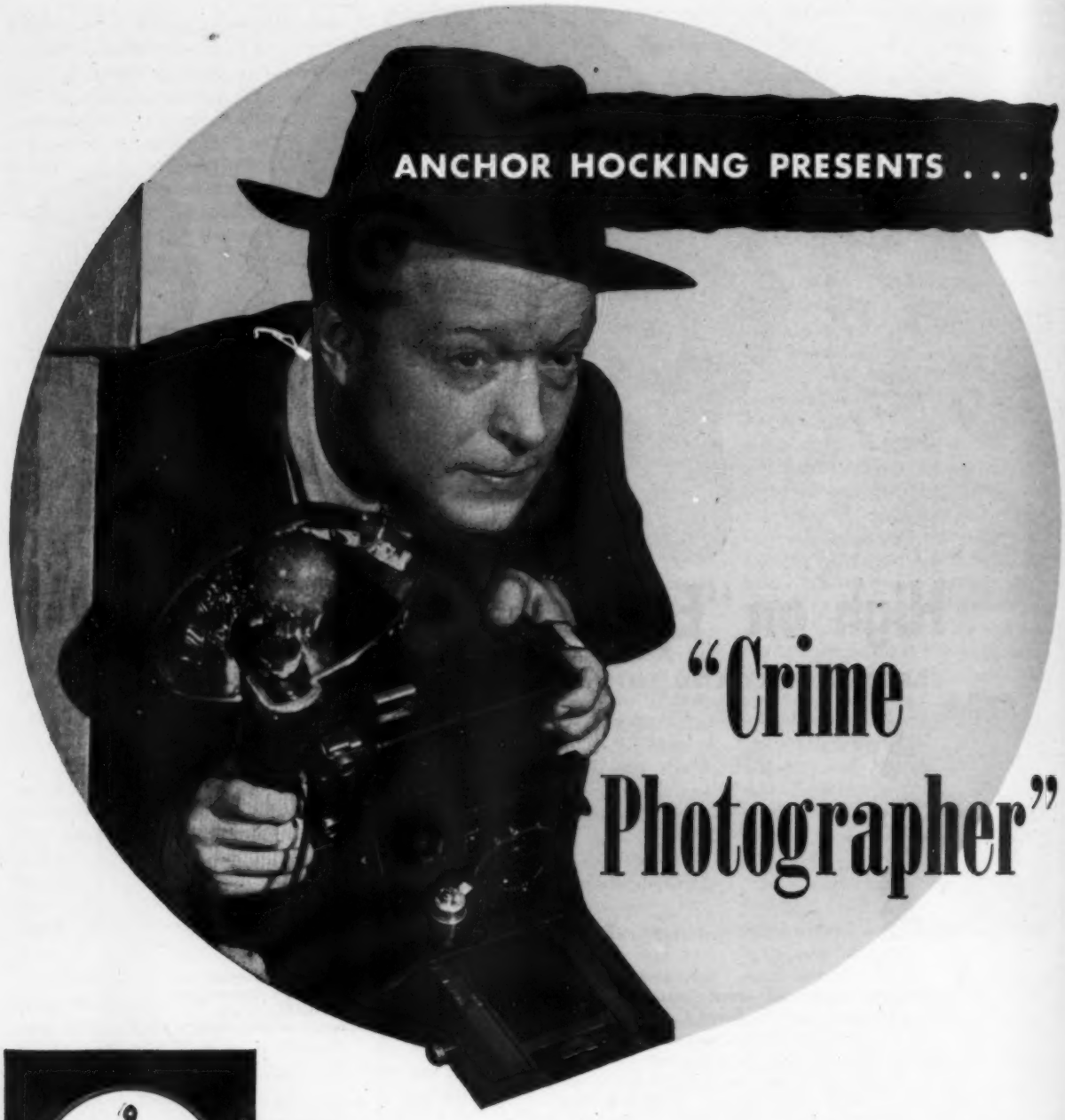
*Reg. U.S. Pat. Off.

Sales Representatives in BOSTON • CHICAGO • DETROIT • NEW YORK • PHILADELPHIA • PITTSBURGH • ST. LOUIS



Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO

. . . an exciting radio mystery show. "Crime Photographer" dramatizes the fictional adventures of Casey, ace cameraman, who covers the city, out-thinking and out-smarting the cleverest criminals. Each Thursday evening over a complete CBS coast-to-coast network, Anchor Hocking and its more than 10,000 employees present these dramatic stories of one of radio's most popular sleuths.

Week after week many new listeners are added to the group of avid mystery fans who regularly tune in "Crime Photographer". And these millions of listeners are being told of the many advantages and conveniences of buying glass-packed products of every description.

For increased radio enjoyment, listen to "Crime Photographer"—for increased sales, specify Anchor-glass containers sealed with Anchor Caps.

by unscrewing the cup the exact amount of oil or Foam bath can be measured out.

Along with the bath oil and foam, Fountainhead has three toilet waters. Pine, Floral and Exotic in 4 and 8 ounce sizes at $1.25 and $2.00 respectively also packaged in transparent acetate containers that permit full view of the items.

Perfume with a Wallop!

Our prize for the month goes to Bonwit Teller for their sly advertisement, spoofing the claims put forth by so many perfume manufacturers.

It shows a perplexed looking lad nursing a shiner while the winner, and still champion, retires to a neutral corner. The inference being that she had dabbed on some "Breathless" by Charbert, and had roused his pulses so he didn't know what he was doing. OK Junior, take your horn and blow.

More on Men's Market

"Esquire" has added another survey to the already considerable number studying men's cosmetics. Of the 357 department stores participating, 90 per cent carry one or more brands of men's toiletries. Among stores doing less than $500,000 a year, 89 per cent carry men's toiletries. Those tores doing an annual business of from $500,000 to $5,000,000, 96 per centcarry them, and those doing over$5,000,000 worth of business a year, 98 per cent carry men's lines.

After shave lotion and talcum are the toiletry items most widely sold in department stores. After shave lotion is carried in 100 per cent of the stores stocking men's toiletries, and is responsible for the largest dollar volume, talcum is stocked by 99 per cent, Cologne is carried by 94 per cent, deodorant by 80 per cent, and lather soap-hair dressing, brushless cream are carried py over 80 per cent; other items listed for sale include gift sets, soaps, shampoos, perfume, special shaving items. Most of the store, about 73 per cent said they did their largest volume in individual sets, while 24 per cent reported their biggest volume in gift sets.

Shulton's Old Spice is carried by a larger number of stores 56 per cent, more than any other brand. Yardley has an almost equally wide distribution, carried by 55 per cent of the department stores. Only one other brand, Seaforth, is carried by over 50 per cent of these retailers.

Shulton retains its leadership in dollar volume in 23 per cent of the stores. Seaforth, which ranks third in distribution is second in dollar volume and leads the sales of other brands in 18 per cent of the department stores. Yardley, although a close competitor to Shulton in distribution, ranks first in dollar volume in only 14 per cent of all department stores.

These department stores pointed out as average of 20 per cent of men's toiletry items are bought by men.

In regard to the departments where men's toiletries were sold, 41 per cent said that they were sold together with women's toiletries, 16 per cent had separate sections, 16 per cent were sold in the men's furnishing department.

As for the future of these men's items, 75 per cent of the stores reported that they believed men's toiletries sales will continue to increase, 19 per cent believe they will remain at the present level. Only 5 per cent said they thought sales would go down. Those who said they believed that sales would go up or remain the same gave as their reasons the fact that there was a growing acceptance, that the merchandise will be more available and that promotion for these items will increase and improve. Those who think that sales will go down think that men's toiletries were a wartime article used to replace other scarce merchandise, and from now on with the return of more items will have less appeal.

Department store toiletry buyers had some comments to make about their stocking men's toiletries. One said "the quality of the material must be improved. Less attention to the packaging and better quality merchandise (better value for the money) is needed."

"We feel that men's toiletries, like sports wear, is just coming into its own as an all year round sales item."

"Plan to eliminate lesser known brands, and carry only nationally advertised lines."

Check Your Oil, Madame!

Kathleen Mary Quinlan's ad for "Precious Night" oil, ought to have husbands running in to buy the stuff like crazy. That is if they have wives who each night rub their faces with grease as if they were attempting a channel swim.

Precious Night, (retails $3.00 to $15.00) is said to sink into the skin and be absorbed quickly, leaving the skin "dewy and not gooey" is for the wise gal who likes to keep up her beauty ritual without scaring the daylights out of her husband.

Drug Companies Well Situated

Sales of leading drug companies should gain about 10 per cent this year. Operating spreads are expected to be well maintained and lower taxes indicate sharp earning improvement. Profits of the cosmetic companies probably will show divergent trends, in line with their varying promotional methods, and container and material problems, as pointed out by Standard and Poor's, industry survey.

To a man in a diver's suit, well-dressed means well-*protected.* A product in a metal container has the same problem. And, in the case of National cans, more than just one kind of protection is demanded.

Air-tightness as well as water-tightness stems from the successful efforts of National Can engineers to make can seams that are second to none. Our work on seams goes back nearly half a century.

If they had time these days, our engineers could stand up and take a bow for their ingenuity and downright helpfulness in getting to the bottom of protection problems. And, busy as they are, they want you to keep sending in your problems.

NATIONAL CAN CORPORATION

EXECUTIVE OFFICES: 110 EAST 42nd STREET, NEW YORK 17, N. Y.

Sales Offices and Plants: Baltimore, Md. • Chicago, Ill. • Hamilton, Ohio • Boston, Mass. Detroit, Michigan • Indianapolis, Ind. • Maspeth, New York • McKeesport, Pa. • St. Louis, Mo.

Helene Pessl's new handi-kit offers the youngster from four to ten her very own manicure essentials attractively packaged

An exquisite fragrance has been created for Joan Bennett and is made available in attractive blue packages in perfume and toilet water.

Dryad, in the new package currently on the market, put out by Andrew Jergens. The opal glass container and cap are by Hazel-Atlas Glass Co.

Since the leading drug manufacturers experienced relatively few operating difficulties during the period of transition following the end of the war, the industry made a better showing than in 1945.

The showing of the drug industry probably will continue superior to that of industry generally, so long as the heavy goods enterprises are hampered by material shortages and labor difficulties.

Despite the elimination of Government business, sales of drugs and pharmaceuticals rose to an all time record in the first half of 1946. Important factors were, the high rate of disposable consumer income, promotion and development of newly acquired lines, expanding production of new products such as penicillin and improving supplies of some drugs and proprietary items, output of which had been restricted during the war.

Demand for cosmetics should be maintained this year. Shortages of materials, such as aromatic chemicals and essential oils, and metal containers probably will prevent important sales gains for most of the cosmetic manufacturers over the near future, while higher labor and material costs and more extensive advertising will also be restrictive, according to this report.

Every Dog Has His Day

Be careful when you reach for the toiletry shelf, because you might be taking Rover's shampoo. Pet-Metic Products, Inc., has brought out a line of "cosmetics" for dogs, consisting of DDT flea powder, shampoo, and perfumed coat dressing.

Designed to appeal to women dog owners who enjoy pampering their pets, the dog preparations come in attractive, perfume-type bottles better fitted for vanity tables than the dog house. Packaged in pink and white stripes, and decorated with a picture of a puppy, carrying the slogan, "For Putting on the Dog." The complete kit sells for $1.98, separate items at 69 cents apiece.

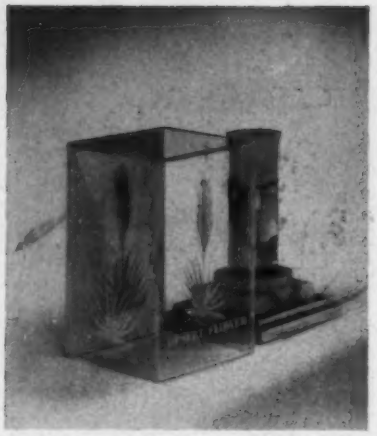
Fad

Chiquita is the name of a new toilet water put out by Fad Beauty Products, New York. The item will sell retail at $1.00 for four ounces and is attractively packaged in a buff box with the name Chiquita embossed on the left side of the label.

Marie Earl's Ballerina perfume is imaginatively packaged in a gold-troughed bottle nestling inside of a white satin ballet slipper in a gold box with a lock.

Colonial Dames has repackaged its Campus line in gay, new packages with eye appeal. The six items come in four colors—blue, pink, chartreuse or tan.

Fad Beauty Products new cologne Chiquita, packaged in simple and engaging embossed buff boxes.



Desert Flower, the new perfume introduced by Leigh, is packaged in a transparent lucite case. The bottle is finished with a fluted white jade-like top.

Desert Flower

Shulton, well known for its traditionally American products, will use the deserts of the Southwest in an introductory campaign in January to bring forth a new perfume, Desert Flower, by Leigh.

A feature of the campaign will be a series of paintings, "Trilogy of the Desert," executed for Leigh by Salvador Dali.

The perfume, is packaged in a transparent lucite case, decorated with desert flowers in white. The glass column containing the perfume is finished off with a fluted white jade-like top. The scent comes in three sizes of one, two, and four drams, priced respectively $2.50, $4.50, $8.00, and toilet water at $1.25.

Revlon's new lucite stick is shaped like a raindrop with a rounded bulky top spiraling down to a slim base of gold-finished brass.

Naylon, the new La Cross nail polish, comes in a small bottle which stands firmly like an ink stand and has an applicator with a quill-type stem to give a controlled polish application.

Naylon

In the past, one of the main drawbacks that plagued the users of nail enamel, was that they had to have the steady hand of a watch repairer in order not to knock over the bottle while they were applying nail polish.

Schnefel Brothers, in introducing its new La Cross, nail preparation "Naylon" have gotten away from the traditional narrow base with a non-tip bottle. The new bottle has a broad base that lessens the danger of the bottle spilling in the course of application. Another improvement is the long stemmed applicator with a short brush which is said to make the application of polish easier by providing better balance and smoother distribution. The polish, retailing at 60 cents, is available in 12 shades.

Design of the new Maybelline package is stream lined and simple. The metal case containing the mascara is slim flat and exquisitely fashioned in gold finish.

Two Timer, a cologne duo has been introduced by bandleader Tommy Tucker in two scents, Sweet, a fragrant scent, and Swing, a brisk version for daytime.

Tommy Tucker Time

Bandleader Tommy Tucker, has entered the cosmetic field with a cologne set, "Two-Timer," to be put on the market shortly.

Two scents, "Swing" for daytime use and "Sweet" for evening and formal wear, are packaged together. The cologne is packaged in stock bottles with plastic closures built to cover the shoulders. A "TT" monogram in gold is rubbed in the top of the closure. Labels, carry a cuckoo clock and a musical staff, trade-mark of the Tucker band.

Produced by Tommy Tucker Perfumes, Inc., Long Island City, N. Y., the set retails for $2.50 plus tax. Plans are being laid for the addition of other items, including a line of men's toiletries to appear in the spring.

The Mem line of men's toiletries is featuring the Mem travel kit of brown leatherette containing three grooming essentials for men in convenient sizes.

To our many friends of the industry, in this and in other lands, we extend our best wishes for a Merry Christmas and a happy and healthful New Year.

The "Perfection" Family

PENNSYLVANIA GLASS PRODUCTS CO.
PITTSBURGH, PENNSYLVANIA, U.S.A.
DECEMBER 1946

package your perfume in KNOX GLASS...

Whether it be perfume, toilet water, bath salts, deodorant or any item in the field of cosmetics, *eye appeal is buy appeal!*

Give your products this power to create attention—arouse interest and stimulate desire on the part of prospects. Package them in sparkling Knox Glass containers.

EVERY KNOX Container A BOOST FOR YOUR PRODUCT

K

KNOX GLASS ASSOCIATES, INC. KNOX, PA.

"The bigger the family—the better the service"

CONTINENTAL

PAPER DIVISION

CAN COMPANY, INC.

PAPER DIVISION Headquarters
230 W. 43d St., New York 18, N. Y.

MONO NESTED AND CYLINDRICAL CONTAINERS

COMBINATION PAPER-AND-METAL CANS

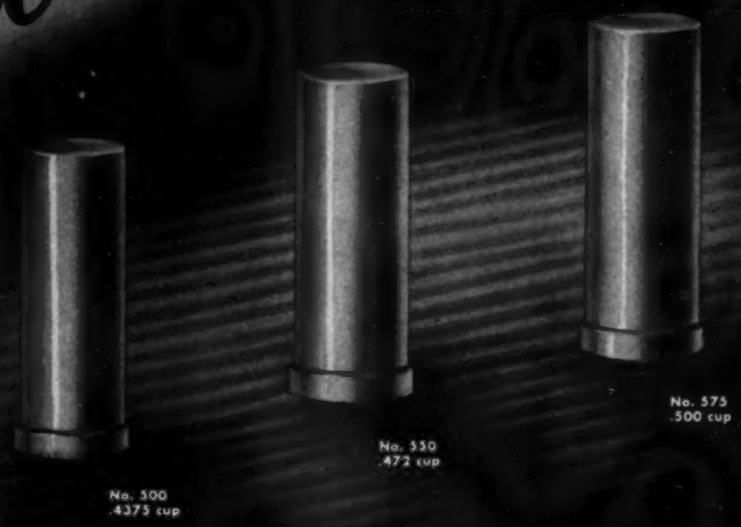
FIBRE DRUMS The Container Co., Van Wert, Ohio

Sales offices in all principal cities

This particular big family—Continental—has been pushing out fibre drums as fast as we can make them. But even we can't make them fast enough—not under today's conditions. We did have swell plans for stepping-up production output 100%, but the situation in coal, steel, transportation, and equipment, hit us just like everyone else. We're doing everything in our power to fill orders as promptly as possible, so that Continental will again be known not only for the best in quality, but the best in service.

Rich Low BRASS

SWIVEL LIPSTICK CONTAINERS



"Fashioned Like Jewels"

THE ULTIMATE IN QUALITY

- De Luxe polished Rich Low brass — baked lacquer finish
- Free wheeling mechanism — It is impossible for the filler to swivel up while the cap is on
- "Click-Tite" closure*

PHONE, WIRE OR WRITE FOR SAMPLES

BRODER INDUSTRIES

INCORPORATED

167 WEST 64th STREET, NEW YORK 23, N. Y. • TRafalgar 7-0092

*Patents Pending

Jean Noel Deodorant is the touch that insures lasting daintiness. Its appeal to the purchaser is enhanced by the appearance of the package . . a distinctive little jar that snuggles right into the palm of your hand and is sealed with an attractively lithographed Crown Screw Cap.

But Crown Screw Caps have more to offer than appearance. There are hidden features that are vitally important to both manufacturer and consumer. Crown Screw Caps, for instance, are highly resistant to rust and oxidation because they are "bonderized." Crown's long experience insures you of the right liner for your particular product. Correct thickness of liners is rigidly maintained. Patented thread construction gives greater sealing pressure and eliminates binding. Features like these are responsible for the ever growing list of nationally prominent manufacturers who standardize on Crown Screw Caps. Crown Cork & Seal Company, Baltimore 3, Md. *World's Largest Makers of Metal Closures.*

Jean Noel Deodorant is manufactured by Keystone Laboratories and distributed by Darboux Toiletries, Memphis, Tenn.

CROWN CLOSURES

Famous Plastics

FOR

FAMOUS MERCHANDISE

PONDS, a famous name in cosmetics, is made by Lamont Corliss Company. They sell beauty through beautiful, attractive containers of Plaskon Molded Color.

Plaskon offers many advantages that make it easy to give drug trade products a distinctive dress. Plaskon is available in a wide range of beautiful, non-fading colors. It can be molded into distinctive designs and shapes. Plaskon is completely impervious to the effects of alcohol, acetone or other organic solvents, and it is not affected by oils or fats. Plaskon is odorless, tasteless and inert.

Your molder, or experienced Plaskon men, will be glad to show how Plaskon can be used to your advantage.

PLASKON DIVISION • LIBBEY-OWENS-FORD GLASS CO. • 2170 Sylvan Ave., Toledo 6, O.
Canadian Agent: Canadian Industries, Ltd., Montreal, P. Q.

PLASKON
TRADE MARK REGISTERED
MOLDED COLOR

MeritSEAL RATES A SECOND LOOK....

The trim, clean-cut beauty of Meritseal is apparent at first glance. But closer examination reveals, beneath this surface beauty, features of design and construction responsible for Meritseal's outstanding satisfaction on the production line, on the display counter and in the hands of the consumer. Let's take a second look at Meritseal . . . and see what makes it CLICK.

MERITSEAL THREAD DESIGN emphasizes pronounced contours and uniformity of pitch. Maximum sealing efficiency is assured, and any tendency of cap freezing to the container is eliminated.

MERITSEAL CONSTRUCTION is simple and efficient . . . it consists of a fabricated sheet metal shell into which is inserted a suitable liner and a thread made from a strip of non-corrosive metal or aluminum. The thread is formed into a ring, holding the liner in position. Lower edge of the shell curves inward, locking the thread in place.

MERITSEAL COATINGS are colorful . . . for sales appeal. They're hard and tough . . . to resist scratching and scarring. They're lacquered or lithographed to meet your requirements.

MERITSEAL SIZES range from 48 mm. to 89 mm., and soon larger sizes will be available. Special sizes can be made with the addition of a nominal tool charge.

MERITSEAL PRICES have been reduced since its introduction. The greatly increased demand for Meritseal and improved manufacturing processes have enabled us to effect economies that mean savings in Meritseal's cost to you.

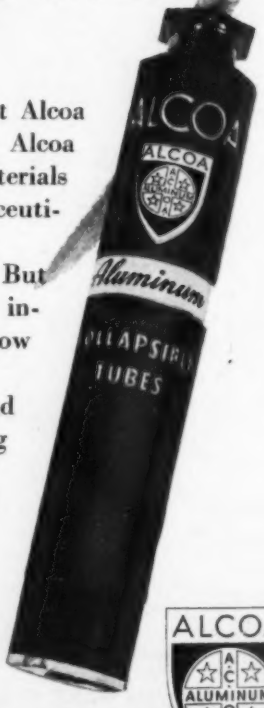
TO MAKE IT EASY *for you to "take a second look at Meritseal" we'll gladly send samples in the sizes to fit your own packages.*

CROWN CORK SPECIALTY CORP.
Division of
Crown Cork & Seal Company

MAIN OFFICE: DECATUR, ILL. • NEW YORK: 60 EAST FORTY-SECOND STREET • CHICAGO: 4343 WEST FIFTH AVENUE
WESTERN REPRESENTATIVE: WESTERN CROWN CORK & SEAL CORPORATION . . . SAN FRANCISCO . . . LOS ANGELES

ANIMAL...VEGETABLE...MINERAL.

All safe in aluminum tubes



More than 70 types of products have already been tested at Alcoa Packaging Laboratory, and proved safe for packing in Alcoa Aluminum Tubes. These products include all types of materials . . . cosmetics, dental and shaving creams, foods, pharmaceuticals, industrial compounds.

Plain Alcoa Aluminum Tubes are safe for most things. But if our tests on *your* products show any reaction, we have inside coatings to provide protection. And our tests will show *which* inside coating is the best for your product.

Alcoa Aluminum Tubes can be decorated in many colors and designs. They are strong to withstand plenty of squeezing and, being light, cost less to ship.

Ask us for the list of products we've already tested and found safe for Alcoa Aluminum Tubes. And let us run tests on *your* material. There's no obligation.

ALUMINUM COMPANY OF AMERICA, 1913 Gulf Building, Pittsburgh 19, Pennsylvania. Offices in leading cities.

ALCOA

ALCOA ALUMINUM TUBES

"Mr. Service of Corning Glass to see you"...

BACK FROM THE WARS and back on the job are most of the Corning Field Research and Service men. Right now they are undergoing a "refresher course" here at the factory brushing up on all the new developments while they were away. Soon, however, they will be out on the road—calling on users of "Pyrex," "Vycor" and "Corning" Laboratory Glassware.

These men are direct factory representatives. They come to serve—not to sell. To bring you news of recent improvements, new discoveries, new methods. To obtain from you your opinion of recent developments and how Corning can make them still better.

Each man is a trained technician. He speaks your language. He understands your problems. His work combines both Field Service and Field Research. He calls on you in your laboratory to determine how Corning can serve you better. And, equally important, to gain new ideas, new suggestions from you. For from these first hand contacts of our field representatives has come the inspiration—the start—of much Corning Research in Glass—research that has constantly improved laboratory glassware and laboratory technique.

The card of the Corning field contact man is a card of cooperation. Any time you spend with him will, we know, be of mutual benefit.

T.M. REG. PYREX U.S. PAT. OFF.

Pyrex is a registered trademark and indicates manufacture by

CORNING GLASS WORKS, CORNING, NEW YORK

FOR ALL-AROUND USE . . . YEAR 'ROUND ECONOMY

PYREX *brand* **LABORATORY GLASSWARE**

CORNING *means* Research in Glass

Beauty of design that lends glamour to your product.

Sturdiness and durability that insures you against undue shipping loss.

Uniformity that means rigid adherence to high standards.

Dependability that insists that performance match the promise.

SUM IT ALL UP IN ONE WORD:

Quality---

100 years of experience and "know how" backs our sincere assurance of quality—in stock or private mould bottles, machine or hand made.

SWINDELL BROTHERS, Inc.

200 FIFTH AVE., NEW YORK ★ BALTIMORE 30, MARYLAND ★ ROBERTO ORTIZ • HAVANA, CUBA

Swindell

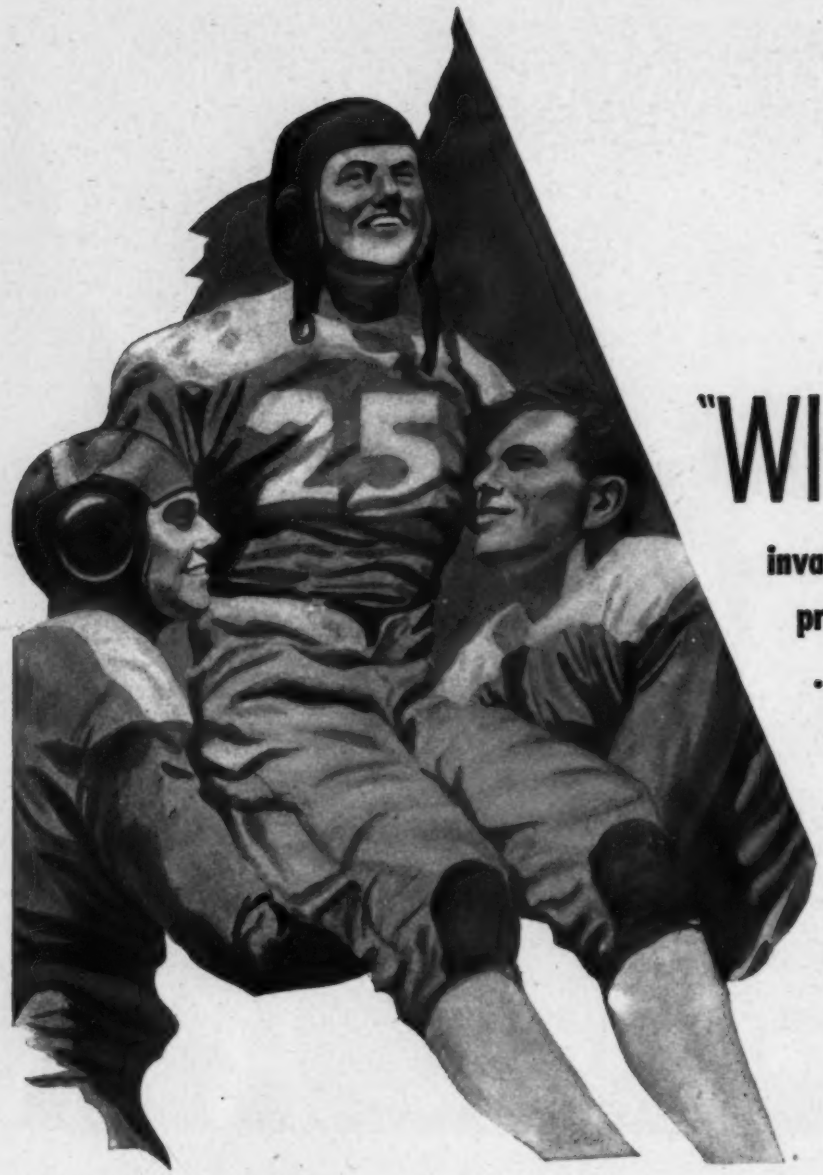
SPECIALIZATION COUNTS*

BERNARDIN
Metal Closures

Bernardin always has offered—and offers today—a highly specialized closure service. No other products distract our minds or divert our facilities. And, because we concentrate on closures *alone*, a distinguished and growing clientele finds many substantial reasons for using more and more of our closures each year. Bernardin Bottle Cap Company, Evansville, Indiana.

** Specialization counts in closures too!*

Since 1881—America's First Manufacturer of metal closures



"WINNERS

invariably have speed . . . precision . . . and skill" . . . says Robert Gair

High speed packaging machinery must have the uniform precision of a "tailor made" carton . . . folding cartons that embody the technical skill and "know-how" so consistently displayed by ROBERT GAIR over a period of more than eighty years.

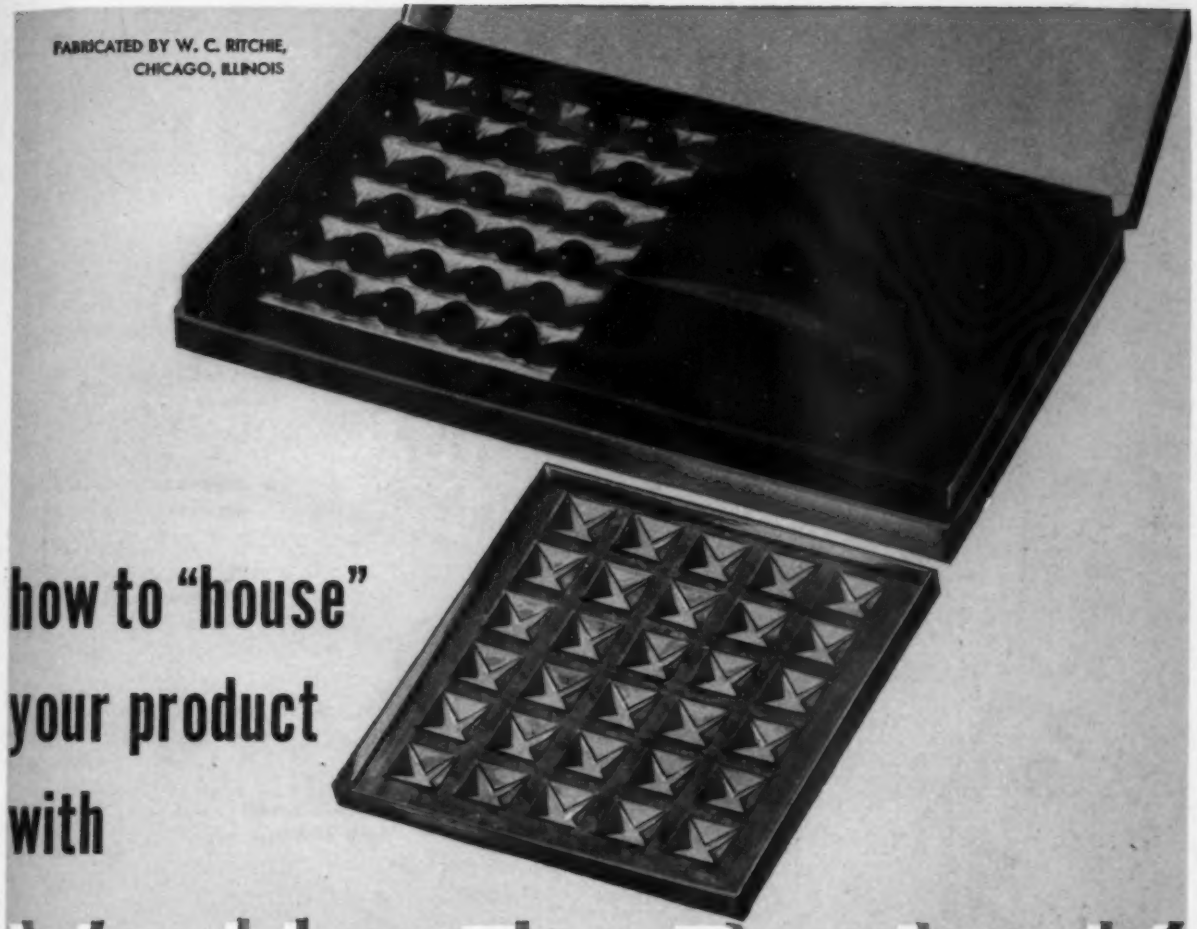
GAIRanteed cartons are consistently WINNERS in fields of keenest competition.

28 PHOTOGRAPHS OF POST-WAR AUTOMATIC PACKAGING MACHINES

Write for 22-page descriptive brochure, featuring 28 photographs of POST-WAR automatic packaging machines.

GAIR

ROBERT GAIR COMPANY, INC., NEW YORK — TORONTO • PAPERBOARD — FOLDING CARTONS — SHIPPING CONTAINERS



FABRICATED BY W. C. RITCHIE,
CHICAGO, ILLINOIS

how to "house" your product with VUEPAK

Versatile Vuepak, rigid and transparent, often serves a functional as well as decorative purpose in packaging today.

Here is an example: a new vitamin box in which the vitamin capsules are attractively arranged with a skillfully punched and turned Vuepak interliner. The capsules are held in convenient rows for wet fingers to grasp without destroying the "clean look."

Today, in 24 basic merchandising fields, Vuepak is introducing new eye-appealing packaging ideas. If you want to see your product going ahead, let your customers see it in a gleaming showcase of Vuepak, the *time-proved* cellulose acetate packaging material. Your box supplier can supply Vuepak facts, or write direct: MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield 2, Mass. In Canada, Monsanto Ltd., Montreal, Toronto, Vancouver.

Questions and Answers on Vuepak

1. What is Vuepak?
Vuepak is a transparent, tough, rigid, beautiful Monsanto cellulose acetate.

2. In what forms is Vuepak available?
In sheets up to 30" wide, and in continuous rolls 30" wide up to 1000 ft. long, in thicknesses up to .015". Available in .020" thickness in rolls with unit finish or in 20" x 50" press polished sheets.

3. In what thicknesses is it ordinarily available?
In six standard gauges 0.005" to 0.020".

4. Does sunlight affect it?
No.

5. Is it affected by heat?
Not under ordinary temperatures. It begins to soften after 200°F. Underwriters' Laboratories classification, "slow burning."

6. How can it be fabricated?
It can be drawn, shaped, formed or folded into almost any shape with inexpensive dies. It can be embossed, stapled, printed, cemented, or combined with other materials.

Vuepak: Reg. U. S. Pat. Off.

MONSANTO PLASTICS
SERVING INDUSTRY. WHICH SERVES MANKIND

VUEPAK
TRANSPARENT PACKAGING MATERIAL
TRADE MARK

★ THE ANCHOR C.T. CAP
★ Broadly rounded, deeply rolled thread provides smoother sealing action
★ Starts fast, spins on easily
★ Exerts even, level sealing pressure on the liner
★ Effectively holds its seal
★ No friction in application, removal and reseal
★ Protects product quality until entirely used
a dependable airtight and leakproof seal

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO

Tune in "Crime Photographer" every Thursday evening, entire Coast-to-Coast Network, CBS.

IT'S the thread design that gives the Anchor C.T. Cap consistently dependable airtight and liquid-tight sealing effectiveness.

The Anchor C.T. Cap thread is broadly rounded. It allows ample clearance over the top of the glass thread—contacts only the underside—eliminates chance of binding. The cap thread is deeply rolled, too, and it makes bearing contact with more than 360° of the container thread surface.

These improvements in thread design provide easy starting; an even and level sealing pressure on the liner around the full top surface of the container finish; and highly effective seal-holding qualities for the Anchor C.T. Cap.

THE GOATS OF KASHMIR

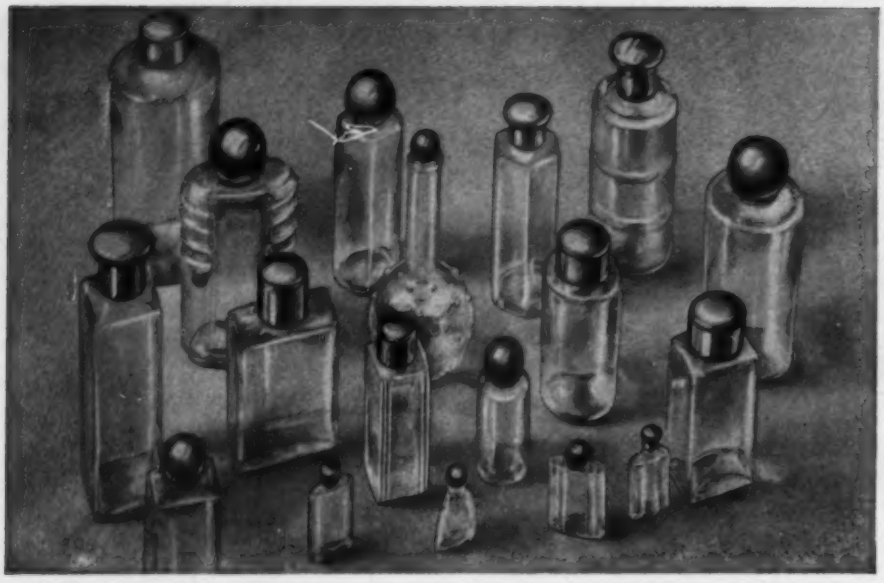
In far off Kashmir, in India, they have very special goats . . . a type that is found no other place except Tibet. What makes these goats so special is a layer of light, delicate wool that grows beneath their outer coat of wiry hair.

This exceptionally fine wool is gathered by the natives with utmost care, since each goat produces but two or three ounces of wool each year. From this wool the famous Kashmir shawls are woven by hand, by highly skilled natives . . . a tedious task that may take two or three men nearly a year. The quality of both the fabric and craftsmanship of these shawls is so highly regarded that it is not unusual for them to sell for as much as fifteen hundred dollars.

In the field of glass containers Carr-Lowrey too has established a reputation for superiority. Strict adherence to the highest standards in glass manufacture for more than 57 years has earned the confidence and acceptance of a host of quality minded buyers.

CARR-LOWREY GLASS CO.

Factory & Main Office: BALTIMORE 3, MD. • *New York Office:* 500 Fifth Ave. (18) • *Chicago Office:* 1502 Merchandise Mart (54)



HEADQUARTERS *for* FINE CLOSURES

•

RICHFORD is Headquarters for those fine Closures that lend crowning distinction to your bottles and jars.

This picture gives you some idea of the versatility of Capstyle Design by RICHFORD Craftsmen. Each Closure is made of solid brass, polished to a permanent lustrous finish that cannot be matched by anything on the market today.

In addition to an exceptionally wide range of outstanding Closures, which are always on hand for immediate delivery, RICHFORD stands ready to develop and produce unusual Capstyles exclusively for your line.

RICHFORD CORPORATION

221 Fourth Ave., New York 3, N. Y. Cable "Richford, N. Y."

Represented in: ST. LOUIS KANSAS CITY CHICAGO LOS ANGELES PITTSBURGH CINCINNATI

....LAST WORD IN "ON THE PACKAGE" PRINTING SENDS HELENA RUBINSTEIN'S "HEAVEN SENT" OUT INTO THE WORLD SELF-ASSURED AND LOVELY IN ITS PERFECTION.

SILK SCREEN PRINTERS TO THE COSMETIC FIELD

CREATIVE PRINTMAKERS, INC.

200 VARICK STREET, NEW YORK 14 • WALKER 5-6300

For Distinctive Glass Containers Set Your Caps to Bonglaco

containers and closures of every description for the cosmetic, drug, chemical and food trades.

Direct Factory Representatives

BONDER GLASS & CLOSURE CO.

58-62 Clay St., Brooklyn 22, N. Y.

Evergreen 9-3624-5

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1—Semi-automatic Labeling Machine.
5—Dry Powder Mixers, up to 2000 lbs.
20—Aluminum, Copper, Glass Lined, jacketed and agitated Kettles.
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2—Colton No. 3 Toggle Presses.
3—Stokes Steam Water Stills, 5, 10, 25 gal. per hour.
2—60 gal. Aluminum Steam Jacketed Kettles.
1—80 gal. Aluminum Steam Jacketed Kettle.
5—Stokes "R" single punch Tablet machines, maximum 2½" dia. tablet.
4—Colton No. 5½ single punch Tablet machines.

Only a partial listing. Send us your inquiries

We buy and sell from a Single Item to a Complete Plant

CONSOLIDATED PRODUCTS CO., INC.

20-21 Park Row, New York N. Y. Shops 335 Doremus Ave. Newark N. J.

A TOAST TO A BETTER 1947!
We sincerely hope that shortages, tension, doubt, and strife will forever pass from our lives. Here's a Merry Christmas and a Happy New Year to all our old friends and friends to come. A heartfelt "Good Luck!" to all.
from John C. Slowey and Company
GLASS CONTAINER & CAP OUTLET COMPANY
876 BROADWAY
NEW YORK 3, N. Y.

Clear Selling Ahead

HERE'S WHAT YOU GET WHEN YOU PACKAGE YOUR PRODUCT IN LUSTEROID

No detours when your product sails to market in LUSTEROID vials and tubes!

These modern containers carry your product . . . protect it . . . and display it to full advantage through crystal-clear walls that are strong, rigid and unbreakable. No chances for your merchandise to be damaged in transit or remain unseen at point of sale.

LUSTEROID's light weight means economy in shipping. You save on labeling, too, beacuse your message can be printed as an integral part of the container.

Comes clear or opaque in all colors of the rainbow. Sizes ¼" to 1¼" in diameter and lengths up to 6". Cork, slip-on or screw-cap closures.

Write for full details today.

LUSTEROID CONTAINER CO., Inc.

Formerly Lusteroid Division of Sillcocks-Miller Company

Office and Factory

10 W. PARKER AVENUE, MAPLEWOOD, N. J.

MAILING ADDRESS: SOUTH ORANGE, N. J.

SOLKA-FLOC, a unique Brown Company product, is a finely divided, chemically purified cellulose fibre. It is steadily finding wider uses in industrial operations for both process and product improvement.

Unexcelled in purity and uniformity, SOLKA-FLOC is produced in a wide variety of physical forms giving unusual combinations of technical properties. Members of the line are unique in the filler field, being excellent binders from non-abrasive organic origin, low in specific gravity and of negligible ash content. The color range of SOLKA-FLOC is from natural cream to pure white. A variety of fibre lengths is available; bulk, apparent density, and absorbency can be controlled. This rare combination of properties has proved its merit in commercial application and SOLKA-FLOC is being profitably adapted to use in the following fields; rubber, plastics, adhesives, protective coatings, ink, filtration, plastic wood, decorative coatings, cosmetics, etc.

For details on how SOLKA-FLOC may be employed to extend supplies of more critical materials, produce new or better finished products, or facilitate manufacturing operations, address our Technical Service Department. Full help will be granted gladly, regardless of your operations, and adequate samples of SOLKA-FLOC supplied.

*Reg. Trade Mark

BROWN COMPANY

FOREMOST* PRODUCERS PURIFIED CELLULOSE

PULP SALES OFFICES: 150 FIFTH AVE., NEW YORK 11, N. Y. • 1150 CONCORD ST., PORTLAND 3, ME.
1150 DEARBORN ST., CHICAGO 5, ILL. • 55 SUTTER ST., SAN FRANCISCO 4, CAL.
BROWN CORPORATION 1186 SUN LIFE BLDG. MONTREAL 2, P.Q., CANADA

This bubble bath bottle is A-4774. The new, colorful Empress closure provides a flattering finishing touch.

A BEAUTY TREATMENT

The *exactly* right container glamorizes your product

Treat your glamor product to a "face-lifting"! Give it more dressing-table appeal by choosing a flattering setting for your label—a container that has grace of line, long-lasting luster, an attractive closure.

The economical stock drug, chemical and toiletry line of Duraglas containers offers more than 1400 different bottles that combine bright beauty with the dependable protection and convenience that the *right* container affords.

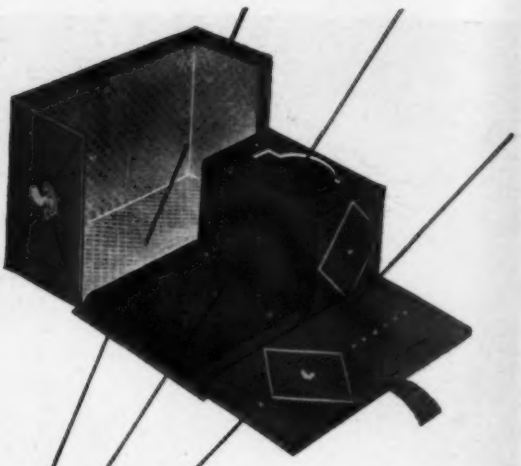
Despite production limitations which today restrict the *quantity* of containers available, our customers need not sacrifice on the *quality* of their packages.

Duraglas CONTAINERS—Protectors of Quality

OWENS-ILLINOIS GLASS COMPANY, TOLEDO 1, OHIO Branches in Principal Cities

Focused . . . . . .

for sales!



We don't mean to imply that people are going to create a panic in an effort to get your products (although it has happened!) But we do imply that your product — properly and colorfully packaged — can create a sensation!

Such is packaging crafted by Warnercraft. For color . . . for design . . . for giving your product the distinctive setting that creates sales, you can rely on Warnercraft. Let Warnercraft's experience aid your profit-making plans!

WARNERCRAFT

"THE FINEST WORD IN PACKAGING"

Makers of set-up and folding boxes of all types, transparent acetate containers, hand made specialties, counter displays and dispensers.

THE WARNER BROTHERS COMPANY

Main Office and Factory: 325 Lafayette Street, Bridgeport, Conn.
New York Sales Office: 200 Madison Avenue, New York, N. Y.

How infrared rays solved a glassmaking problem

Shortly after the war shut off all imports of handmade bottles, an Armstrong customer brought in an unusual glassmaking problem. One of his specialties had been packed in a handmade bottle with a distinctive raised medallion. Could we help him maintain package identity by reproducing this special bottle?

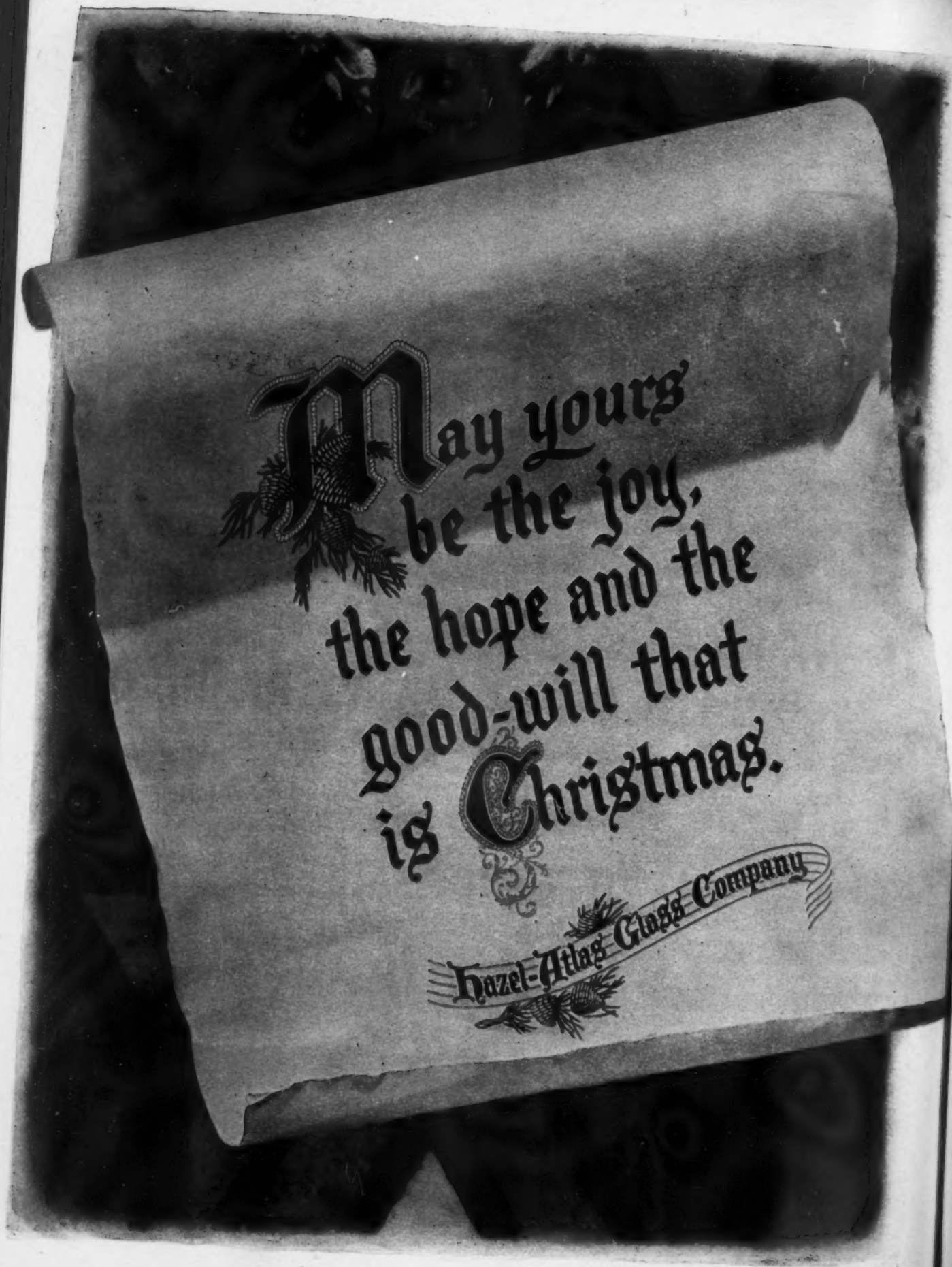
The bottle and the medallion could not be blown in one piece by automatic methods. And even after the design department made molds that exactly reproduced the bottle and medallion separately, the problem of bringing them together remained.

Fusing proved too costly. Finally, one of Armstrong's adhesive specialists suggested gluing the medallion to the bottle and formulated an adhesive that held the two together perfectly . . . in Armstrong's laboratory.

On the customer's assembly line, however, the adhesive apparently lost its grip. The medallions fell off constantly, until an Armstrong technician, hurriedly dispatched to the plant, came up with an unusual suggestion: "Run your bottles and medallions through a bank of infrared lamps before you apply the adhesive, and they'll stay together." And they did! The heat from the lamps on the bottles dried the unnoticed moisture which had prevented the adhesive from working properly.

Whatever your particular glass or closure problem, you're sure of the best in technical advice when you bring it to Armstrong. 196 trained technicians in Armstrong's Central Technical Research Laboratories and dozens of experts in Purchasing, Package Design, Traffic, Engineering, Production Planning, and other departments are constantly on the job to make sure you get the best possible glass and closure service.

For details on Armstrong's glass or closures call your Armstrong representative or write direct to Armstrong Cork Company, Glass and Closure Division, 3812 Prince Street, Lancaster, Pennsylvania.


May yours
be the joy,
the hope and the
good-will that
is Christmas.
Hazel-Atlas Glass Company

NEWS...

Druggist Elected to Congress

Robert Tripp Ross, manager of the Liggett Rexall Drug Store 35-25 77 St., Jackson Heights, N. Y., was elected to congress on the Republican ticket November 5. He will represent the 5th Congressional District of New York City.

Born in Washington, in 1903, Mr. Ross moved to New York in 1929. In that year he joined the United-Rexall Drug Company as a salesman in a store in Brooklyn. He became manager of this store in 1937, and in 1938, he was transferred to the Jackson Heights unit as store manager.

Mills Appointed by Winthrop

Sidney C. Mills has been appointed administrative assistant to the president and assistant treasurer of Winthrop Chemical Co., Inc. He will make his headquarters at the company's main office, 170 Varick St., New York.

Born in Whitesboro, Texas, 1903, Mr. Mills attended schools in Oklahoma, and received his Ph.G. degree in 1923 from the School of Pharmacy, University of Oklahoma.

From 1923 to 1931 Mr. Mills was in

SIDNEY C. MILLS

the retail drug business and from 1931 to 1936 he was associated with the Upjohn Co. In 1936 he joined Winthrop and served as regional manager for the mid-West; next as manager of the Atlanta and Chicago divisions, and later as assistant division manager of the St. Louis division.

Doyle Joins Lakeside

William T. Doyle, formerly coordinator of Sales and advertising for Lederle Labs., division, American Cyanamid Co., has been appointed director of product development and marketing by the Lakeside Labs., of Milwaukee.

Mr. Doyle, known in the drug industry for his many contributions to management and retail trade publications, is also the senior author of a book on the development and marketing of drug products.

WILLIAM T. DOYLE

Rexall Drug Co. Now

The name of the United-Rexall Drug Co., has been changed to the Rexall Drug Co., in another step of the firm's program to take full advantage of its best-known trade name, Rexall, For more than a year it has been moving in that direction in its advertising, packaging and identification of Rexall stores operated by the company.

Rexall was coined 43 years ago by Walter J. Wilson for the late Louis K. Liggett, founder of the United Drug Co., the original firm name. Mr. Wilson is still with the company as editor of the magazine, Rexall Advantages, house organ for the thousands of Rexall druggists.

Danilek—Revlon Comptroller

Joseph A. Danilek, who was recently general sales manager of Affiliated Products Corp., and before that assistant to the president for Dorothy Gray

JOSEPH A. DANILEK

and comptroller for Elizabeth Arden, has been appointed comptroller of Revlon Products Corp.

He was a member of the board of directors of the Toilet Goods Assn., and is the chairman of the Tax Committee for the cosmetic industry. During the war he was a member of the Advisory Committee to the WPB for the cosmetic industry.

Another appointment made by Revlon was Frank Heinemann as assistant retail sales manager to Herbert Hyams, retail sales manager.

Mr. Heinemann was recently associated with Harriet Hubbard Ayer in a sales capacity. Before that he was divisional sales manager for Lehn & Fink.

Royal Advances Moyer

Sidney L. Moyer has been appointed executive vice president of the Royal Pharmacal Corp., it has been announced by Frederic J. Trump, president. Mr. Moyer until recently as general manager of the company's Chicago plant. At the same time, Mr. Trump made known the resignation of A. Kamen as a director of the corporation.

M. K. Katz to Form Company

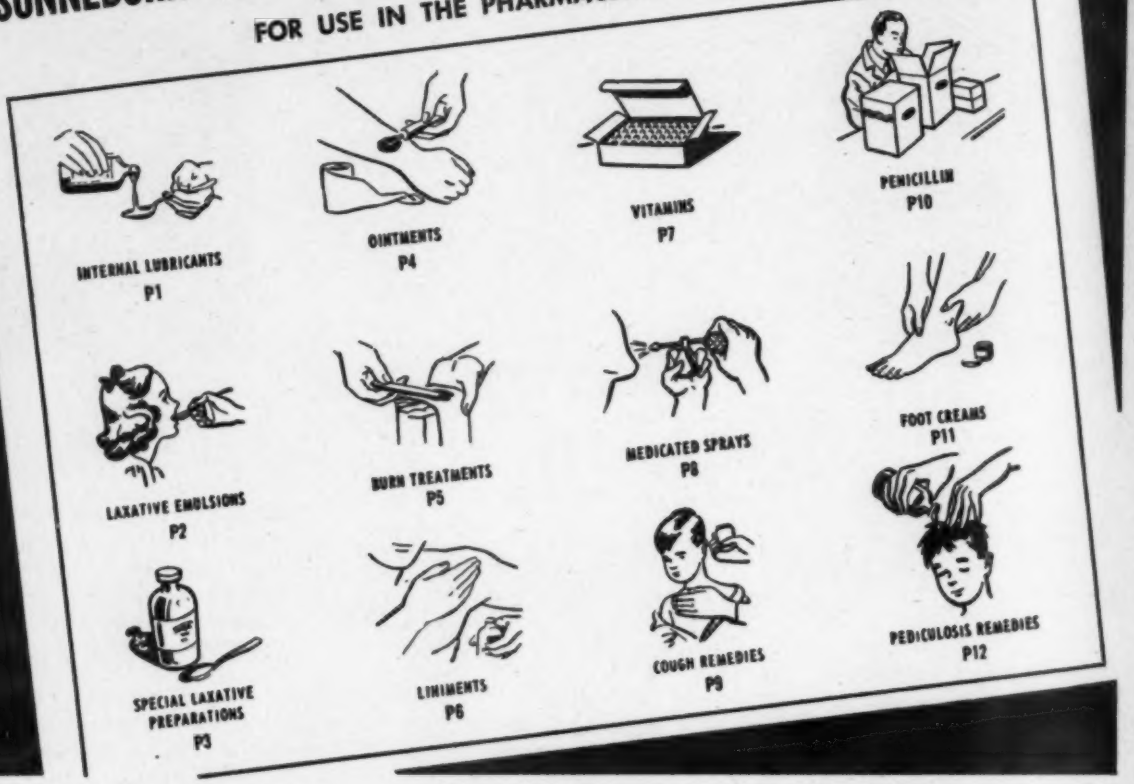
M. K. Katz, vice president and sales manager of Volupte Compacts, Inc., and Herb Farm Shop Ltd., plans to resign effective December 30th, and organize a company, which he will head.

Before joining Herb Farm Shop, three years ago, Mr. Katz was sales manager of Helena Rubinstein, Inc. Prior to that, he was connected with Macy & Co., for 12 years.

LATEST INFORMATION ON

SONNEBORN White Oils, Petrolatums and Petroleum Specialties

FOR USE IN THE PHARMACEUTICAL FIELD



Leading pharmaceutical manufacturers have long standardized on SONNEBORN White Oils, Petrolatums and Petroleum Specialties . . . convincing evidence of the unsurpassed Quality, Purity and Stability of these highly refined ingredients, a few typical end-uses of which are shown above.

The broad research facilities of the SONNEBORN laboratories, backed by 65 years of refining experience, are available for aid in solving current production problems and in the development of new pharmaceuticals.

Check the coupon (marking appropriate key letters) to receive free technical data on subjects of most immediate interest to you.

White Oil and Petrolatum Division—**L. SONNEBORN SONS, INC.**
Dept. DC12, 88 Lexington Avenue, New York 16, N. Y.
Please send latest technical data on Sonneborn products for end-uses checked (refer to illustrations for key letters):

P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Name _____

Company _____

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City _____ P.O. Zone _____ State _____

SONNEBORN PRODUCTS FOR QUALITY PHARMACEUTICALS

WHITE MINERAL OILS

KAYDOL — U. S. P. Heavy
ORZOL — U. S. P. Heavy
PROTOL — U. S. P. Heavy
ERVOL — U. S. P. Light
BLANDOL — U. S. P. Light
CARNATION • KLEAROL

PETROLATUMS U.S.P.

TYPE I: Medium Consistency — White Protopet — Yellow Protopet and other colors
TYPE II: Soft Consistency — White Fonoline — Yellow Fonoline
TYPE III: Medium Consistency with High Melting Point — White Perfecta

SPECIALTIES

SONO-JELL—Complete series for ointments, etc.
DEO-BASE — Light hydrocarbon distillate refined to complete freedom from kerosene odor
TRI-OL — Base for soap-sensitive skin cleansers

WHITE OIL AND PETROLATUM DIVISION

L. SONNEBORN SONS, INC.

88 LEXINGTON AVENUE, NEW YORK 16, N. Y.

Refineries: Petrolia and Franklin, Pa. • *Branch Offices:* Chicago, Baltimore, Philadelphia and Los Angeles • Stocks carried in principal cities.

In the Southwest: Sonneborn Bros., Dallas 1, Texas

Bristol-Myers Names Elterich

Harold N. Elterich has been named advertising manager of the International Division of Bristol-Myers Co. Mr. Elterich was born in Chefoo, China,

HAROLD ELTERICH

attended school there, later studying at Wooster College, Ohio.

During World War I he was for three years Vice-Consul at Chefoo. Returning to America in 1929, he spent four years as assistant export sales manager of the H. J. Heinz Co., Pittsburgh, followed by three years with the Kraft Cheese Co., New York.

Since 1929, Mr. Elterich has been active in the field of international advertising. From 1937-1941 he headed his own agency. When this country entered the war, he became associated with the co-ordinator of Inter-American affairs, in charge of their advertising program.

Squibb Elects Directors

At a meeting of the board of directors of E. R. Squibb & Sons, all the company's officers were re-elected with the exception of John N. Staples, who retires as senior vice president. Mr. Staples will continue, however, as director of the company.

Watch To Dr. Austin

At a luncheon meeting of the Scientific Advisory Committee of the Toilet Goods Assn., held at the Waldorf-Astoria, November 14. Dr. Frederick J. Austin, was presented with a watch by the committee.

Dr. Austin was associated with Dr. E. R. Squibb, founder of E. R. Squibb & Sons. While there, he was in charge of the control laboratory and did a great deal of work on the assay of alkaloids. After leaving Squibb, Dr. Austin acted as a consultant, later joining Richard Hudnut to take charge of their control laboratory.

Mildred Leary Cosmetics

After an absence of four years, Mildred Leary, has reentered the cosmetic field to bring out a full line of cosmetics under her own name.

Miss Leary, last identified with Dorothy Gray, was one of the top salaried women in the cosmetic field, and is also considered one of the best informed women in the cosmetic trade.

R. L. Watkins Doubles Laboratory

The R. L. Watkins Co., Division, Sterling Drug Inc., has doubled the space of its control laboratory in its Rahway plant. Henry Tuckley, chief chemist is in charge and Leopold Szalkowski and Marion Kelly, have joined the laboratory as staff chemist and technician respectively.

Monsanto Appoints Hobson

The appointment of Edwin L. Hobson, as assistant branch manager of the New York office of Monsanto Chemical Company's Plastics Division has been announced by F. A. Abbiati, general manager of sales. He will assist C. F. Reeves, manager of the office at 30 Rockfeller Plaza.

During the war, Mr. Hobson, as a Lieutenant Colonel, was assigned to the Quartermaster General Office. He was Plastics Section Chief of the Military Planning Division's research and development bureau.

He received his chemical engineering degree from MIT in 1937. From that year to 1941 he was a sales engineer for the Bakelite Corp., New York. He joined Monsanto last May, following his discharge from the Army.

CHARLES S. MODYS

Modys—Ciba Personnel Director

The board of directors at Ciba Pharmaceutical Products, Inc., have appointed Charles S. Modys as personnel director. Mr. Modys joined Ciba in 1944, and has served as executive secretary to the management committee.

At the same time the board announced the appointment of Lucien J. Sichel as secretary of the firm. Mr.

L. J. SICHEL

Sichel joined Ciba last July following four years in the Army.

Mario Rigaud Visits Here

Mario Rigaud, president of Rigaud Perfume Co., Paris, and Rigaud Inc., New York, has arrived in this country with his wife, to launch his latest perfume creations.

Mr. Rigaud is the grandson of the founder of the perfume house he now heads. In 1939, immediately upon his graduation from the National School for Economics and Social Studies in Paris, he was mobilized into the French Army. He was wounded during the German offensive on Dunkirk and taken prisoner. For his war service Mr. Rigaud was awarded the French Military Medal and the Croix de Guerre.

Rosenthal-Bercow Co., Inc.

H. H. Rosenthal Co., has changed the company's name to the Rosenthal-Bercow Co., Inc., The new firm will continue under the same management and personnel, at 25 E. 26 St., New York.

Granatek Joins Bristol Labs.

Peter A. Granatek has joined Bristol Laboratories Inc., product development division in Syracuse, it has been announced by Dr. Amel R. Menotti, director of research.

Mr. Granatek, who received his B.S. in chemistry from Trinity College, Hartford, Conn., in 1942, was a control and research chemist at Ernst Bischoff Pharmaceutical Co., for two years, and prior to that was with V. S. Industrial Chemicals in Baltimore.

Drug Products Co. Reorganizes

The reorganization and expansion of The Drug Products Co., Inc., pharmaceutical manufacturers, has been made known by Joseph H. Moss, president.

J. H. MOSS

The first move was the acquisition of Purity Drug Co. Inc., of Passaic, N. J., and the transfer of all executive offices and manufacturing operations of both companies to Passaic. Each company, however, will retain its own identity.

Key figures in the management of the reorganized company, are Joseph H. Moss, president, E. R. Clinton, executive vice president, Julius Kesser and George E. Hickey, vice presidents, Ernest S. Thomforde, general sales manager, Patrick J. Salamankas, production

E. R. CLINTON

manager, and Stephen P. Joffre, chief chemist.

Society of Cosmetic Chemists

The second annual meeting of the Society of Cosmetic Chemists was held December 6, at the Savoy-Plaza Hotel, New York. Among the speakers featured were Dr. Kurt P. Wynner, Dr. A. F. Guiteras, F. E. Snell, Inc., Dr. Louis Schwartz, U. S. Public Health Service, Miss Ruth Boyle, Good Housekeeping Beauty Clinic, Dr. S. M. Peck, Dermatologist, F. C. Reinshield, Analyte Instrument, Inc.

Naugatuck Opens West Coast Branch

Maurice G. Couderchet of Naugatuck Aromatics, division of the U. S. Rubber Co., has just returned from the West Coast, where a branch office was opened.

T. Henry Reardon, formerly connected with Naugatuck's New York office, will contact the trade on the coast. The new address is P. O. Box 487, Torrance, Los Angeles, Calif.

Appointments to Warner Institute

Appointments to the Warner Institute for Therapeutic Research, have been announced by Elmer H. Bobst, president of William R. Warner & Co., Inc. Named as senior chemists in the Organic Chemistry division were, Drs. Charles P. Hutterer, Frederick Leonard and E. H. Sakal.

Dr. Hutterer, a graduate of the University of Vienna, was formerly associated with Ciba Pharmaceutical Co., where he worked on compounds with anti-histaminic activity. Dr. Leonard, specializing on antispasmodics, was formerly connected with Hoffmann-La Roche, Inc. Dr. Sakal, recently honorably discharged from the U. S. Marine Corps., was a research chemist with the Rohm and Haas Co.

Dr. Louis Magid, a graduate of the University of Florida and formerly associated as chief of pharmaceutical research at The William S. Merrell Co., has been placed in a responsible position in the pharmaceutical research division of the Warner Institute of Therapeutic Research. Dr. Gene W. Johnston was appointed as senior chemist of the same division.

Dr. R. J. Schachter was named as senior pharmacologist in the Pharmacology and Chermotherapy division. Dr. Schachter was in charge of the department of Physiology at Winthrop Chemical Co. Previously he was associated with Dr. Carlson at the University of Chicago.

Another appointment was that of J. R. Weaver as chief of the control laboratories of William R. Warner & Co., Inc., and Richard Hudnut. Mr. Weaver was formerly in charge of the manufacturing and control department of Hoffmann-La Roche, Inc.

Testimonial Dinner to Max Hott

A farewell party was given November 12 for Max Hott, who resigned as divisional vice president of Dr. W. B. Caldwell Co., Division of Sterling Drug Inc., to devote all his time to farming and other interests.

Frolich Joins Merck

The appointment of Dr. Per K. Frolich to the newly-created post of coordinator of research for Merck & Co., Inc., has been made known by Dr.

DR. PER K. FROLICH

Randolph T. Major, director of research and development.

Born in Norway in 1899, Dr. Frolich received his technical education at Norway Institute of Technology. He took graduate study at M.I.T., teaching and carrying on research in chemistry until 1929, when he joined the Standard Oil Company of New Jersey.

New Plant for Ungerer

The cornerstone of the new administration building for the Ungerer plant

FREDERICK H. UNGERER

at Totowa, N. J., was installed by Frederick Ungerer, son of the founder, with the entire Ungerer organization of office and factory workers present for the event.

Three buildings of the plant, including the new flavor laboratory, are now in operation.

Roubechez Import Co. Formed

Arnold F. Anderson, and Frank H. Sloan, both formerly with Rene Forster Co., Inc., have started operations as Roubechez Import Co., at 8 E. 12 St., New York, offering a complete line of essential oils and aromatic chemicals.

Three requirements* in the making of Bismuth preparations

*Fine chemicals of measured purity

*Your technical skill in manufacturing

*Rigid laboratory control in your plant

To relieve upset stomachs or gastro-intestinal irritations, physicians often prescribe bismuth antacid preparations – in liquid, powder or tablet form.

Leading pharmaceutical manufacturers see to it that the antacid preparations they make are of the highest quality and purity.

To achieve such results, these manufacturers use care and skill in their manufacturing. They *make sure* of these three requirements:

- The most uniform fine chemicals, which are important ingredients in an antacid preparation.
- scientific compounding of all the ingredients into a quality finished product.
- rigid laboratory control maintained throughout the manufacturing procedure.

These are *essential* requirements.

And the first of these requirements—selection of the basic fine chemicals—is important to manufacturers of antacid preparations.

Here, purity to the decimal and controlled uniformity of physical specifications must be selected *at the beginning.* Your product depends upon it and your manufacturing job is easier all the way.

That's why so many manufacturers choose Baker's fine chemicals—Baker's Bismuth Subnitrate, Bismuth Subcarbonate, Bismuth Subgallate, Bismuth Subsalicylate.

Measured purity is the foundation upon which Baker has built its service to you. For many years, leading pharmaceutical and drug companies have known, and bought, Baker's fine chemicals (purity by the ton).

No matter what product you manufacture—if it requires one or more fine chemicals, specify Baker and you'll specify quality *at the beginning.*

J. T. Baker Chemical Co., *Executive Offices and Plant:* Phillipsburg, N. J. *Branch Offices:* New York, Philadelphia, Boston and Chicago

Baker's
FINE CHEMICALS

To our friends everywhere . . . we, of Heyden, extend heartiest greetings and most cordial good wishes for a happy Yuletide and a prosperous New Year.

Heyden Chemical Corporation, New York, N.Y.

Abbott Sales Changes

The creation of four new sales divisions and the promotion of fourteeen sales representatives to positions of increased importance with Abbott Laboratories, is announced by Raymond E.

GEORGE EPSTEIN SR.

Horn, vice president and director of sales.

George Epstein, Sr., will manage the central sales division, with headquarters in Chicago. Employed in 1910 as a shipping clerk, Mr. Epstein became a salesman in 1911, a district manager in 1928, and manager of the Chicago branch in 1933.

H. S. Wilkinson will manage the East-central sales division, with headquarters in Cincinnati. He started in the biological department in 1929. In 1933, he was added to the field sales staff. He was promoted to district manager in 1937, and became manager of the Cincinnati branch in 1943.

T. E. Braden will manage the West-central sales division, in Kansas City. Mr. Braden was employed as an Abbott salesman in 1928. He was appointed a

H. S. WILKINSON

district manager in 1934 and manager of Abbott's Kansas City branch when it opened in 1938.

C. B. Dyar will manage the Southeastern sales division, in Atlanta. He came to Abbott in 1912 as a salesman, was promoted to district manager in 1928, and to manager of the Atlanta branch when it was opened in 1934.

Other sales promotions made known were the following men appointed as district managers: R. J. von Danden to manager of the Chicago sales area; J. F. Bolan to the East central Kentucky and Southern Ohio sales area, M. V. Wertzberger to the Oklahoma-Kansas-Missouri sales area; P. G. McGlothing to manager of the Rocky Mountain sales area, H. J. Kohl to manager of the Iowa-Nebraska-South Dakota sales area; G. S. Thornhill to manager of the Southern New England sales area; Haydn Raabe to the New Jersey sales area; P. J. Morrissette to the Albany-Schenectady sales area; and William Austin to the Ontario and Western Canadian Province sales area.

Louis Horrvich is transferred from manager of the Southern New England

T. E. BRADEN

sales area to manager of the Brooklyn-Long Island sales area.

Stein, Hall Buys Frank-Vliet

Frank-Vliet Co., Inc., New York, became as of December 1, the Frank-Vliet Co., Inc. Division of Stein, Hall & Co., Inc.

Arthur H. Frank president, and Edward Port Vliet, treasurer and secretary, will act in an advisory capacity for a brief time and then retire.

Schieffelin Advances Kennedy

At a meeting of the board of directors of Schieffelin & Co., James C. Kennedy, Jr., was appointed executive president.

Prior to this Mr. Kennedy was chairman of the executive committee in charge of the research and development, a position he still holds. He has been a director of the company for the past seventeen years.

Col. Martens Joins Mennen

Colonel William C. Martens has been appointed as assistant to the president and director of finance. William G. Mennen Sr., president of the Mennen Co., has announced.

COL. MARTENS

Colonel Martens was chief of the renegotiations branch of the Army Service Forces and was a member of the War Department Price Administration Board.

Lautier Fils Buys Building

Lautier Fils, Inc., have purchased the five-story building at 321 Fifth Ave., where the firm will establish its New York headquarters.

Dr. Hooper Joins Bristol Labs.

Dr. Irving R. Hooper, formerly of Ohio State University research foundation, has joined the research staff of Bristol Laboratories, Inc.

Dr. Hooper, a native of Michigan, received his degree from Michigan State

DR. IRVING R. HOOPER

Normal in 1941 and his Ph.D. from the University of Illinois in 1944.

As a research chemist, Dr. Hooper worked with Parke, Davis from 1944 to 1945 and then joined the University research foundation.

HIGHLIGHTS FROM THE DECEMBER ISSUE

American Druggist

THE BUSINESS MAGAZINE WITH PUNCH AND POWER

Better Merchants

Although sales may be up, some merchants do not make the most of their inventory. They feel that increased sales automatically mean increased net profits. This month American Druggist publishes a chart which shows the relationship between inventory and sales. The article is typical of the editors' desire to make better merchants of the nation's 55,000 drug store owners.

Time For Frankness

Occasionally the pharmaceutical profession, through no fault of its own, is blamed for accidents which happen in the nation's hospitals. Many of these hospitals do not have full time pharmacists operating their dispensaries. The December issue frankly reports these conditions in an article by associate editor Irving Rubin. This is another example of the progressive editorial policy that builds readership for the magazine.

You Can't Say That!

The Food and Drug Administration regulations are "ridiculous" in some instances, according to this pharmacy college dean. Never afraid to tackle a tough industry problem, the editors asked three widely respected drug leaders to comment. Read the dean's letter and the three comments, and let us know how you feel about the problem.

ON THE PHARMACY FRONT

Do You Recognize These Doctors? Two pharmacists discuss the doctors they don't like and the ones they do like 70

The Mind And The Body. Carolyn Valentine writes an interesting article on psychosomatic medicine 72

Do FDA Labeling Requirements Go Too Far? Three industry leaders answer a question posed by Dean Dirstine of Washington State College 80

Immunization 84

Who Fills Prescriptions In Hospital Pharmacies? Irving Rubin states the facts about present conditions in our hospital pharmacies 88

ON THE BUSINESS FRONT

Stock Less, Sell More. In time for the annual inventory, H. W. Adkins provides a chart to show how inventory should compare to sales 76

How To Be A Cosmetician. Mona Manet describes how a saleslgirl can be developed into a real cosmetician 78

Applying Modern Design To The Drug Store. Ken H. Pfeiffer designs a drug store floor plan and tells how he reached his conclusions 82

At The Cosmetic Counter 118

Longer Dating Requested On Hog-Cholera Virus 122

ON MANY FRONTS

The Gift Of Faith (Editorial) 69

Too Old For Christmas. Pharmacist Louis Devon writes a short story for the holiday season about a man who faced the end of his pharmacy career 74

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Beautiful But Dumb

There is no place for the beautiful but dumb girl behind the cosmetic counter. As a matter of fact, intelligence is a far greater requisite for a good cosmetician than is beauty, according to this article by Mona Manet, cosmetic editor. Retail druggists, after reading the information contained in her article, will be able to better understand the role of the cosmetician and be better able to select the proper girl for training. Better cosmeticians will mean more cosmetic sales, and more sales are the aim of manufacturers, wholesalers, and retailers alike.

AMERICAN DRUGGIST, 572 MADISON AVENUE, NEW YORK 22, N. Y

Muckle Named Chapin Sales Mgr.

Russell Muckle, formerly professional service representative of the Frederick Stearns & Co., Division, Sterling Drug, Inc., has been named sales manager of the Chapin Co., a subsidiary.

Mr. Muckle first became associated with Stearns in 1934. For six years, from 1934 to 1940, he was its representative in Singapore, covering Burma, Malaya, Siam and the Dutch East Indies. In 1941 he was sent to Buenos Aires to represent Stearns in South America. Enlisting in the Navy in 1943, he served as a Lieutenant in Military Government in Okinawa and Letye and as loading officer in Guam, until his release last February.

Stanetel Corp. Completes Plant

A modern two story fireproof building has been completed in Linden, N. J., by the Stanetal Corp. The structure consists of 6,000 square feet which will be used for the manufacture of pure organic chemicals and pharmaceuticals. An extremely well equipped analytical and research laboratories as well as a complete chemical library are provided for the chemists.

Lemmermeyer Returns from Europe

Michael Lemmermeyer, president of Aromatic Products Inc., returned from Europe, aboard the "Queen Elizabeth" on her maiden voyage.

During his four week trip, he visited England and France. He spent two weeks in Grasse, France, making arrangements with P. Robertet & Cie., to resume the sale of their natural products in this country.

I. E. LA RUE

M. M. & R. Appoints la Rue and Olds

I. E. (Jack) la Rue has been appointed to the post of New England divisional sales manager for Magnus, Mabee & Reynard, Inc., Along with this the company also made it known that Stanley T. Olds, has been assigned to cover the mid-western territory.

Mr. Olds was formerly sales repre-

STANLEY OLDS

sentative for MM&R in the metropolitan New York area, joined the company last year upon his discharge from the Army.

Simon Askin—Heyden P. A.

Appointment of Simon Askin as director of purchases to succeed Robert P. Gould, retired, has been announced by the Heyden Chemical Corp. In his new post, Mr. Askin will have charge of all purchases, including raw materials and equipment.

Mr. Askin is assistant secretary and assistant treasurer of the corporation, and is located at the company's main office at 393 Seventh Ave., New York.

Centaur Appoints O'Bryan

Raymond O'Bryan, has been appointed sales representative for the Centaur Co., division of Sterling Drug, Inc., New York, with headquarters in Denver.

Mr. O'Bryan succeeds Harold Cooke, transferred to Cleveland, to replace Richard Reddaway, resigned. During the past five years, Mr. O'Bryan served as a captain in the Army.

Buy Hoosier Pharmacal Co.

William C. Dabney, Sr., William C. Dabney, Jr., and Watson B. Dabney have purchased controlling interest in the Hoosier Pharmacal Co. of Indianapolis, from Estella M. Watkins, who inherited the business from her late husband.

At a meeting of the board of directors, William C. Dabney, Jr., was elected president, Watson Dabney, vice president and treasurer, and Annetta Loucks, secretary.

More B_6 Production

A new manufacturing unit for the production of critically needed Vitamin B_6 will be erected at Elkton, Va., George W. Merck, president of Merck & Co., Inc., has announced, approval for the $295,000 four building unit was granted by the CPA at Richmond.

"Total cost of the new plants," Merck said, "will be in the neighborhood of $1,500,000 of which by far the greatest expense will be for equipment. There will be two process buildings, one of which is already constructed, a cooling tower and reservoir, and a small. refrigeration building."

Irvington Varnish Subsidiary

The Irvington Varnish & Insulator Co., Irvington, N. J., has opened a West Coast subsidiary, the Irvington Varnish & Insulator Co.—Western, at El Monte, Calif.

According to A. E. Jones, president, the new plant will produce chemical resistant cap lining materials for the metal and molded cap industry.

Willis G. Sweet, who has been associated with the parent company for more than 13 years has been appointed resident vice president in charge of operations. Clifford W. Brown will be production manager. Operations are expected to begin about January 1.

Sigler—Grove Sales Manager

Russell Vreeland has made known the appointment of Carl H. Sigler as sales manager of the Grove Lab., Inc., St. Louis. Formerly assistant sales manager for Bauer & Black, Mr. Sigler directed the training of all salesmen in the drug and related fields. Later as

CARL SIGLER

sales manager, Surgical Dealer Sales, he was successful in developing sales for the company products through drug, department store, and professional fields.

Westfried Joins Gunning & Gunning

Ernest A. Westfried, well known in the essential oil industry both here and abroad for over a quarter of a century, has joined Gunning & Gunning Inc.,

E. A. WESTFRIED

New York, in an executive capacity. His headquarters will be at the main offices of the firm, 601 W. 26 St., New York.

Gunning & Gunning Inc., organized in 1922 by Nelson A. Gunning recently added an essential oil department. Connections have been established with some of the leading primary sources throughout the world.

Huisking Twins

The grandchildren of Charles L. Huisking were increased by two girls on November 12 when twin girls were born to Mr. and Mrs. William W. Huisking. The twins, who were born within ten minutes of each other, were not lightweights, weighing 6 pounds 11 ounces, and 6 pounds 12 ounces. The Hu sking grandchildren now number 9, of which 8 are girls, and one is a boy. Charlie, Jr. has one girl, Bill has three girls, Eddie has three girls, and Dick has a boy and a girl. Bill said that the arrival of twins was a complete surprise to everybody including the doctor who was too busy to x-ray to determine whether or not the birth was to be a multiple one. Bill says that he has not decided whether or not to go after the record of Peter Dirr, of the Huisking firm, who has hung up his gloves after producing 13 children.

Curll Advanced by Commercial

Daniel B. Curll, Jr., formerly assistant to Henry W. Denny, vice president in charge of sales, has been appointed sales manager of the new Dixie Chemicals Division of Commercial Solvents Corp.

The new division will handle anhydrous ammonia and other chemicals produced at the Sterlington, La., plant purchased from the War Assets Administration.

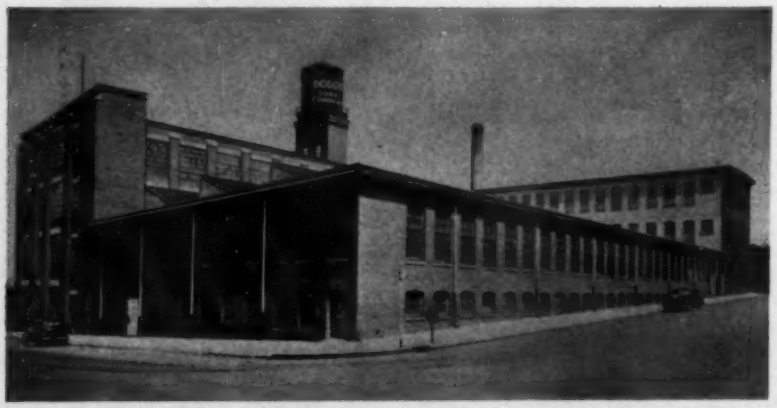
Frank E. Maple, formerly in the Technical Service division at Terre Haute, Ind., now is assistant to Mr. Denny.

Abbott Branch in Buffalo

To provide customers in Northern and Western New York, and Eastern Pennsylvania with prompt and efficient service, Abbott Laboratories, have opened a new branch at 1226 Main St., Buffalo 9, New York.

Thomas C. Sangeorge is manager of the branch. He joined Abbott in 1933 as a salesman, and was promoted to a district manager in 1937, a position he will continue to hold.

Karl E. Kuechler has been appointed office manager of the Buffalo branch. He was formerly in the planning department.



The new main plant of the Dodge Cork Co. Inc., in Lancaster Pa., put into operation, after fire necessitated moving from the former premises. The "new" plant was formerly used for cork storage purposes.

Sharp & Dohme Advances Egry

R. O. Lohrberg, general sales director of Sharp & Dohme, has announced the appointment of Charles Egry as supervisor of field operation.

CHARLES EGRY

A graduate of Columbia University, Mr. Egry joined Sharp & Dohme in 1929 as a sales representative in the New York district. He was appointed assistant sales manager in that district in 1937 and continued in that capacity until November 1942, when he entered the service. Mr. Egry served in the administration division of the Medical Corps and was separated from the service with the rank of Captain in August 1944.

Foragers Fiftieth Anniversary

On January 11, 1947, the Foragers of America will celebrate their fiftieth anniversary, as the oldest drug and cosmetic salesmen's organization in the country. Plans are being laid for a banquet, to be held at the Biltmore Hotel in New York.

Bleser's 50th Anniversary

Joseph J. Bleser, senior partner of the Michigan Capsule Co., manufacturer of gelatin capsules, Detroit, is celebrating fifty years in the industry.

Short Retires from Warner

The retirement of L. I. Short, former New York Sales manager of William R. Warner & Co., Inc., has been announced by M. M. Ricketts, general sales manager.

Mr. Short, who began as a salesman, had been with the company for more than 23 years. Ill health these past few months necessitated the curtailment of many of his duties and Mr. Short felt that voluntary retirement might give him a chance to regain his strength. He will, however, be available to the organization in an advisory capacity.

ADVERTISEMENT—*This entire page is a paid advertisement* *Prepared Monthly by U. S. Industrial Chemicals, Inc.*

U.S.I. CHEMICAL NEWS

December ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1946

THE MONTH IN THE AUTOMOTIVE INDUSTRY

A new device to remove gum, varnish, and carbon in cylinders is produced . . . A new plant, manufacturing synthetic liquid motor fuel from farm residues, is placed in operation in this country . . . Surveys show that the production of gasoline from coal is practical but not yet competitive with production from crude oil . . . Lubricants containing ingredients for wetting metal surfaces tend to decrease the rate of wear in engines, according to a report . . . A motor fuel, said to be stable against gum formation, is patented . . . Placed on the market is a war-developed oil which is claimed to loosen deposits of soot, carbon, varnish, and sludge in the old engine in addition to lubricating . . . A new machine for repairing tires and other rubber products is manufactured . . . Successful tests are run on the production of synthetic gas from anthracite and pure oxygen . . . A new synthetic lubricant is prepared by adding butanol to 1,2 propylene oxide . . . New-type cables, insulated with vinyl plastics, are reported to resist the attacks of grease, oil, gasoline, and "corona" . . . Details are published of the "catarole" process for producing aromatic hydrocarbons from petroleum . . . Government research discloses that natural gas can be used successfully in Diesel engines.

Novel Process Prevents Acid-Fading in Textiles

Textiles which neither fade nor change color when exposed to acid fumes, such as the combustion products of coal or gas, are now possible, according to the claims made in a recent patent. Anti-fading qualities are imparted to the fabric by treatment with aqueous solutions of triethanolamine containing a solvent or swelling agent for the organic derivative of cellulose materials. Suitable swelling compounds are said to be ethyl alcohol, butyl alcohol, and acetone. Ethyl alcohol is reported to be employed in aiding the triethanolamine penetrate the textile material, and may be present in the aqueous solution in varying concentrations.

Methionine Is Found to Have Anti-Anemic Action

Rats made anemic by injections of carbon tetrachloride were treated successfully by methionine injections, according to a paper published recently by two French scientists. The methionine is said to have caused a rapid increase in red-cell count even though the administration of small doses of carbon tetrachloride was continued. Oral administration of methionine corrected anemia due to treatment with carbon tetrachloride or to a diet deficient in methionine, the authors state.

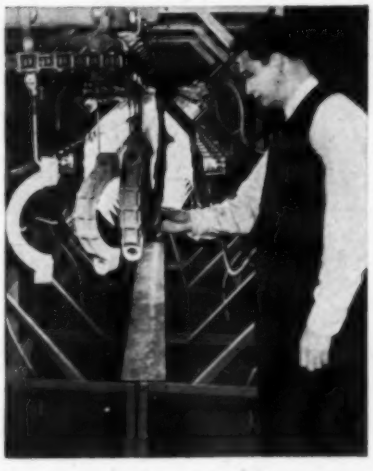
New Saccharin Synthesis

Saccharin has been commercially prepared from anthranilic acid (*o*-amino-benzoic acid), it was announced recently. The yield, based on this starting material, is 58-60 per cent, and the cost is as low as that of previously used processes, the report states.

Wide Use Seen for Organic Chemicals in Post-War Autos

Applications Include Antifreezes, Protective Coatings, Upholstery, And Insulating, Dewaxing, and Corrosion-inhibiting Compounds

Vital to the appearance and performance of the high-powered, sleek-looking cars now beginning to roll from the assembly lines are many types of organic chemicals. Applications of these versatile compounds range from today's color-rich, long-lasting finishes to materials that prevent the formation of corrosive substances in the fuel and lubricating systems. Outstanding U.S.I. contributions to the automotive industry include many of these important organic chemicals as well as proprietary products such as Super Pyro Antifreeze, Solox — a general purpose solvent, and PiB — an ignition insulation material.



Their surfaces finished hard and tough, these couplings emerge from the infra-red ovens. Many automotive coatings are now manufactured with the aid of U.S.I. resins, solvents, and plasticizers.

Coatings, Plastics, Upholstery

Many synthetic and natural resins, and solvents and plasticizers aid in the production of quick-drying, durable, attractive finishes which help speed the production of trailers, trucks, busses, streetcars, passenger cars, trac-

(*Continued on next page*)

The 1947 cars look better, ride better, thanks to the help of a wide variety of organic chemicals.

Farm Products Are Source Of New Synthetic Fibers

Government laboratories throughout the country have developed new synthetic fibers from agricultural products and improved old ones, according to an announcement made recently. These fibers are not intended to replace natural fibers, but are expected to improve natural fibers when the two are mixed. All the experimental fibers developed so far are high in wet strength.

Most important of the new fibers is Savelon, manufactured from peanut protein. It has a light cream color and is said to be reminiscent of both silk and wool. Another new fiber is said to be manufactured from chicken feathers. Improvements have also been made in a fiber made from zein, a protein obtained from corn, and in casein fiber. The new zein fiber is stated to have a rich, creamy appearance and a dry strength almost equal to wool. The improved casein fiber is reported to be more uniform and more economical than its predecessor.

Fish Odor of Vitamins Destroyed by New Process

A method for removing undesirable tastes and odors of fat-soluble vitamin-containing materials such as fish oils and concentrates while retaining their potency, is announced in a patent issued recently. The patent describes the process as consisting of mixing the vitamin materials with crude vegetable oils and heating in an open vessel in the presence of an inert gas.

New Soap Preservative

The development of rancidity and discoloration in granular soap products is inhibited by a new product, according to the claims made in a patent issued recently. The inhibitor is described as a polyethylene polyamine.

ADVERTISEMENT—*This entire page is a paid advertisement.*

December ★ **U.S.I. CHEMICAL NEWS** ★ 1946

Organic Chemicals in Post-War Autos

(Continued from preceding page)

tors and other transport equipment. Many of these coatings, based on new alkyd resins, bake fast to produce a gloss that stands up under water, weather, oil, alcohol, and gasoline. The use of these products also imparts to the automotive finishes the important characteristics of hardness, toughness, mar-resistance and adhesion. Finishes of this type wash easily, and respond to polishing quickly.

U.S.I. Chemicals in the Automotive Industry

U.S.I. manufactures the following organic chemicals vital to the manufacture of today's automobiles, busses, trucks, and similar forms of transportation:

CHEMICALS — Ethyl alcohol, butyl alcohol, specially denatured alcohol, completely denatured alcohol, acetone, amyl acetate, butyl acetate, ethyl acetate, diethyl oxalate, diamyl phthalate, dibutyl phthalate, diethyl phthalate, natural and synthetic resins.

PROPRIETARY PRODUCTS—Super Pyro Antifreeze, PiB, Ansols, and Solox. (Registered trade marks of U.S.I.)

Important steps in the manufacture of many of the plastic and plastic-treated parts of the modern car require the use of U.S.I. organic chemicals. Solvents and plasticizers are frequently employed in the manufacture of molded plastic items, such as electrical fixtures, distributor heads, door handles, and dashboard instruments. The same products are used in the production of plastic-treated fabrics for upholstery. This new-type upholstery makes smarter, brighter colors practical, doesn't fade or change color, stays cleaner longer, and defies wear.

Boosts Performance

U.S.I. contributions to the high operating efficiency of today's cars include the improvement of the quality of gasoline and lubricating oil, the removal of cylinder carbon, and the protection of radiators against low temperatures. Organic chemicals are used to manufacture that well-known anti-knock compound, tetraethyl lead, and to dewax, purify, and refine lubricating oils. Recent studies from abroad have also shown that small amounts of diethyl oxalate inhibit the corrosion of metallic bearings.

Antifreeze protection is supplied by Super Pyro and U.S.I. completely denatured alcohol. These two types of antifreeze products will provide low-temperature protection suitable for all types of automobile cooling systems. Super Pyro also lessens the danger of overheating since it keeps the cooling system clean.

An ideal companion for Super Pyro Antifreeze in the automotive field is PiB, a unique insulating material which shows remarkable ability to protect electrical systems from moisture, wet weather, and many acids. This liquid product is applied by brush or spray on plugs, wiring, distributors, coil terminals, and batteries — and once the engine has been properly treated with PiB, it can be "hosed down," and it won't even miss.

Other Applications

Organic solvents are used in the preparation of synthetic rubber for the manufacture of tires and accessories. Small amounts of methyl, diethyl, or dibutyl phthalate have been suggested to increase substantially the load-carrying capacity of lubricants. Highly flexible, permanently transparent sheets for use in laminated safety glass can be formed from polyvinyl resins made from butanol. Butanol is also used in the manufacture of accelerators for rubber vulcanization.

Polyvinyl butyral, essential in the manufacture of the plastic interlayer for this shatterproof windshield, is made with butanol.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

A new sizing agent, developed due to shortages of corn and other starches, is described as a soluble resin, having all the superior qualities of the older sizing agents. **(No. 139)**

USI

A non-flammable oil, said to be suitable for use in aircraft, is reported to have been approved by the Naval Research Laboratory. **(No. 140)**

USI

To prevent discoloration of plastics, a new stabilizing agent has been developed. It is described as a liquid which prevents discoloration due to high temperature and exposure to sunlight. **(No. 141)**

USI

A new water repellant for textiles, papers, and ceramics is non-acid, and will not cause deterioration in the fibers of textiles or papers, according to the manufacturer. **(No. 142)**

USI

A new plasticizer for protein plastics is described as an amber-colored viscous liquid, said to give tough, flexible, permanent films. It is recommended for use in compounding synthetic coatings and adhesives. **(No. 143)**

USI

A new wood floor preservative, said to penetrate, seal, and finish all types of wood floors in only one application, is stated to be impervious to the action of water and alcohol. **(No. 144)**

USI

A new waterless cleaner removes dirt, grease, ink, rust-stains, and dried paint from hands merely by rubbing and wiping, the manufacturer states. **(No. 145)**

USI

A slide rule, reported to be accurate to 19 decimal places, is now being marketed. **(No. 146)**

USI

To protect wood products from swelling, a new process is announced which is said to produce a high degree of dimensional stability. **(No. 147)**

USI

To keep shipments from sliding in railroad cars, trucks and steamships, thus cutting transit losses, a new adhesive has been developed. Applied to the bottom surface of each container, it is alleged to have high sheer strength which prevents sidewise or lengthwise shifting, and low tensile strength which permits the easy release of each container by a sharp upward blow. **(No. 148)**

U.S.I INDUSTRIAL CHEMICALS, INC.

60 EAST 42ND ST., NEW YORK 17, N. Y. U.S.I. BRANCHES IN ALL PRINCIPAL CITIES

ALCOHOLS
Amyl Alcohol
Butanol (Normal Butyl Alcohol)
Fusel Oil—Refined

Ethanol (Ethyl Alcohol)
Specially Denatured—all regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof, C.P. 96%
Absolute
*Super Pyro Anti-freeze
*Solox proprietary Solvent

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Ansol M
Ansol PR

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ACETIC ESTERS
Amyl Acetate
Butyl Acetate
Ethyl Acetate

OXALIC ESTERS
Dibutyl Oxalate
Diethyl Oxalate

PHTHALIC ESTERS
Diamyl Phthalate
Dibutyl Phthalate
Diethyl Phthalate

OTHER ESTERS
*Diatol
Diethyl Carbonate
Ethyl Chloroformate
Ethyl Formate

INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-anisidide
Acetoacet-ortho-chloranilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloranilide
Alpha-acetylbutyrolactone
5-Chloro-2-pentanone
5-Diethylamino-2-pentanone
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Alpha-Oxalpropionate
Ethyl Sodium Oxalacetate
Methyl Cyclopropyl Ketone

ETHERS
Ethyl Ether
Ethyl Ether Absolute—A.C.S.

FEED CONCENTRATES
Riboflavin Concentrates
*Vacatone 40
*Curbay B-G *Curbay Special Liquid

ACETONE
Chemically Pure

RESINS
Ester Gums—all types
Congo Gums—raw, fused & esterified
*Aroplaz—alkyds and allied materials
*Arofene—pure phenolics
*Arochem—modified types
Natural Resins—all standard grades

OTHER PRODUCTS
Collodions
Ethylene
Ethylene Glycol
Urethan
Nitrocellulose Solutions
dl-Methionine

Printed in U.S.A.

Merrell Adds Three Scientists

The appointment of three new members to the scientific staff has been made known by The Wm. S. Merrell Co., Cincinnati.

DR. GEORGE SCHNELLER

Dr. George Henry Schneller, the new chief of the Pharmaceutical division, has had extensive experience in pharmaceutical research. He received his B.S. and Ph.G. degree from St. John's University, his M.S. from New York University and his Ph.D. from Brooklyn Polytechnic Institute.

Dr. W. Albert Strong is now a member of the Antibiotic division of the Merrell Co. Dr. Strong, who received his M.S. and Ph.D. degrees from Pennsylvania State University, recently completed on streptomycin under a fellowship at the University of Illinois.

DR. W. A. STRONG

James L. Stone, a graduate of Princeton, has also become a member of the Merrell Antibiotic division. Mr. Stone recently completed over four years in the Coast Guard.

Montano Joins Hopkins

Vito N. Montano has been appointed to the staff of the control laboratory of J. L. Hopkins & Co., Mr. Montano served in the Army Medical Corps during the war.

Moulton Joins Bjorksten Labs.

Dr. C. Robert Moulton has joined the staff of Bjorksten Laboratories as a research associate. A graduate of the University of Missouri, Dr. Moulton directed research on nutrition and health problems at the Institute of American Meat Packers. As advertising counsellor and consulting chemist in the food field, Dr. Moulton has participated in recent publicity campaigns of several nationally known products.

Sterling Drug Advances Doolittle

James Hill, Jr., president of Sterling Drug, Inc., has made it known that Richard E. Doolittle, former assistant manager of the Chicago branch of Sterling Drug, Inc., has been elected divisional vice president in charge of the Dr. W. B. Caldwell Division at Monticello, Ill.

Monsanto Appoints Gillis

Monsanto Chemical Co., has appointed John L. Gillis, former general export manager and assistant director of the foreign department, as head of the foreign department.

Mr. Gillis succeeds Arnold H. Smith, head of the foreign department for the last year, who has been named as representative of the executive committee to consolidate the interests of Monsanto in Australia.

Joining Monsanto in 1933, Gillis left the company in 1944 when he became vice president of Johnson & Johnson International. He returned to the Monsanto foreign department last September.

Mr. Smith joined Monsanto in 1922 in the rubber service laboratories at Akron, Ohio, and served as research chemist, salesmen, assistant manager and finally technical sales manager. He served with the company in England from 1930 to 1940.

European Scientists Employment

The American Society of European Chemists and Pharmacists, established six years ago to foster international exchange of ideas and information on professional subjects, has established a regular employment service for its members, to serve prospective employers, as well as employees.

The service includes jobs in the fields of chemistry, physics, pharmacy, pharmacology, and the natural sciences. The Association is at the Master Institute, 310 Riverside Drive, New York.

Gallowhur Joins Skoll

Skoll Co., Inc., manufacturers of Skol, has merged with Gallowhur Chemical Corp., under the new corporate name of Gallowhur Chemical Corp.

GEORGE GALLOWHUR

This consolidation was characterized by George Gallowhur, newly elected president and treasurer, as the beginning of an intensive program of expansion.

Julius Fleischmann, former member of the board of directors of Standard Brands, and James M. Fasset, New York attorney, were named directors of the new corporation, in addition to Mr. Gallowhur. John H. Connor, formerly sales manager of International Plastics Corp., was elected vice president and sales manager. Marguerite McCaffrey and Robert Owen were named secretary and assistant secretary respectively.

JOHN H. CONNOR

Yardley Gets More Space

Yardley of London, Inc., has leased one and one-half floors in the plant of National Pneumatic Co., Rahway, N. J., and began manufacturing and packaging operations there.

Malmstrom Chicago Office

N. I. Malmstrom & Co., have opened a new office and warehouse at 30 West Washington St., Chicago.

Ethavan, Monsanto's Ethyl Vanillin, a flavor principle with a "vanilla-like" odor and flavor, used as an aroma fixative in the formulation of soaps and delicate perfumes.
Coumarin Monsanto, a synthetic odor principle, used to enhance the bouquet of soaps and perfumes; also to amplify the more delicate aroma of vanillin.
Methyl Salicylate, Monsanto, U. S. P., Synthetic, Monsanto oil of wintergreen, used to impart pleasant odor to soaps for pets.

SALES SCENTS for your products

If the sales of your products respond to a pleasing fragrance, use Monsanto Ethavan,* Coumarin or Methyl Salicylate, U.S.P., to impart intriguing odors, accent aromas, or as a fixative. Many manufacturers have found that it is good sales sense to take advantage of the true aroma, unvarying strength and unusual "staying" powers of these Monsanto synthetics. They lend distinction to cosmetics and preserve their fragrant identity to the point of final use.

Try them! Samples of any or all of these Monsanto synthetic aromas will be sent on request. Contact the nearest Monsanto District Office, or write MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 1700 South Second Street, St. Louis 4, Missouri. District Offices in: New York, Chicago, Boston, Detroit, Charlotte, Birmingham, Los Angeles, San Francisco, Seattle, Montreal, Toronto.

*Reg. U. S. Pat. Off.

MONSANTO CHEMICALS

SERVING INDUSTRY...WHICH SERVES MANKIND

N. W. D. A. Fellowship

With a view to improving wholesale drug distribution throughout the nation, the executive committee of the NWDA, voted to establish a research fellowship in some university which would subject to investigation the more than fifty different types of jobs involved in drug wholesaling.

The study will be known as the NWDA fellowship on wholesale drug job classification and evaluation. It will be directed by Charles D. Doerr, vice president of McKesson & Robbins, Inc., New York, chairman of the NWDA committee on employer and employee relations. The committee has not yet determined the college at which the fellowship will be established.

E. Allen Newcomb, executive secretary of NWDA, pointed out that the fellowship will be a part of the general research program being conducted by the association on behalf of the industry. Two other fellowships have already been established. They are on sales management and warehouse operations.

Hoffmann-LaRoche in St. Louis

Hoffmann-La Roche, Inc., have opened a branch sales office in St. Louis, to facilitate service to physicians and pharmacists in the city and its environs.

The new office is located in the Continental Building, Grand Blvd., and Olive St. In charge is Robert C. Keppler who has been with Roche for seven years and not long out of the Navy where he held the rank of lieutenant.

Milano Heads Berkeley Chemical

The Berkeley Chemical Corp., Berkeley Heights, N. J., announce the election of new officers following a stockholder's meeting in New York.

Robert J. Milano, is the new president, other new officers are: A. A. Cole, vice president; Jerome F. McGinty, secretary; Charles L. Westernberg, treas.

Nuttle Heads Penick Flavor Sales

Philip E. Nuttle has been appointed head of sales in the flavor department of S. B. Penick & Co.

Prior to joining the firm, Mr. Nuttle was an executive officer of the Hospital Service Plan of N. J. A graduate of Johns Hopkins University, he has had wide experience in the administrative and public relations fields, including fourteen years with the Fidelity and Deposit Co., of Maryland.

Sharp & Dohme Appointed Dr. Boger

Sharp & Dohme have promoted Dr. William P. Boger to the position of associate medical director.

DR. BOGER

A graduate of Bucknell University and the Harvard Medical School, Dr. Boger interned at the Philadelphia General Hospital, served as assistant resident in medicine at the Massachusetts General Hospital, Boston, and at the Medical College of Virginia, Richmond.

Sprague Joins Hinde & Dauch

Carl F. Sprague has been appointed manager of the Sandusky, Ohio Package Laboratory of the Hinde & Dauch Paper Co. Mr. Sprague spent a number of years in the package design division of General Electric Co., Cleveland, where he developed and designed a number of electric lamp packages. In 1942 he was assigned the responsibility of all war packing of the lamp dept., and was placed in charge of packing design in the Defense Plant Corp.

After the war, Mr. Sprague joined the merchandise preparation dept., of Spiegel Inc., Chicago.

Correction

In the October issue, a news item regarding W. D. Ticknor, Jr., the export manager of Commercial Solvents Corp., was run with a picture with his name on it. The picture however, was of Herman Goldstein, director of drug store operations for United Cigar-Whelan Stores Corp.

Appointments to Sterling-Winthrop Institute

Appointment of three scientists to the staff of the Sterling-Winthrop Research Institute, has been announced by Dr. Maurice L. Tainter.

Dr. Frederic C. Nachod has been appointed senior research chemist in the department of physical chemistry; Dr. Froilan P. Luduena, senior pharmacologist; and Kenneth D. Fleischer, B.S., M.S. senior chemist in the microanalytical laboratory.

Dr. Nachod replaces Dr. G. W. Ewing, who resigned to become assistant professor of chemistry at Union University, Schenectady. Dr. Nachod received his Sc. D degree from Utrecht University, Holland.

Dr. Luduena obtained his medical degree from Rosario University in Argentina, and subsequently won the Prince of Wales Scholarship at Oxford University, where he got his Ph.D., degree in 1937. From 1943 to 1946, Dr. Luduena was senior pharmacologist at the Stanford Medical School in Calif.

Mr. Fleischer received his training at Hartwick College and New York University. From 1941 to June of 1946 he was associated with the National Bureau of Standards, Washington.

Paul M. Fred

Paul M. Fred, fifty-five, sales manager of the Foster-Forbes Glass Co., died November 24, at the Marion General Hospital, Marion, Ind., where he had been a patient for two weeks. He had been in ill health for the past several months.

A native of Ossian, Ind., Mr. Fred had lived in Marion for more than 30 years. He served as sales manager of the Standard Glass Co., prior to its merger with the Foster-Forbes Glass Co.

During the first World War, he was a lieutenant with an artillery regiment and was awarded the purple heart for wounds received in action in France.

Samuel H. Ebert

Samuel H. Ebert, president of the Interstate Color Co., New York, died of a heart ailment October 29 at the Westchester Square Hospital, the Bronx. He was sixty-nine years old.

Dr. George W. McFatrick

Dr. George W. McFatrick, one of the founders of the Murine Co., Inc., died November 10, in Chicago after an illness of two weeks.

Dr. McFatrick was born in 1870, and was a graduate of Bennett Medical College and the American College of Medicine and Surgery Specializing in Diseases of the Eye. He practiced as an oculist in Chicago for many years, and together with his brother, the late Dr. James B. McFatrick and the late Otis F. Hall, started the Murine Company.

He is survived by his wife and sister.

This SAVING is for you!

MACHINE BUNDLING SAVES UP TO 60% on MATERIAL COSTS

and makes large savings on

• labor costs • shipping costs • floor space

Our current volume of orders indicates that manufacturers are going in for machine bundling in a big way. This is not surprising, in view of the many economies that machine bundling affords.

By replacing costly boxes with our machine bundlers, some have been able to *save as much as 60% on material costs*—a mighty desirable economy, especially today when costs in general are increasing. Further, machine bundling makes an obvious saving in labor, since the machine can be fed directly from the cartoning or wrapping machines. Floor space formerly used for storing bulky boxes may be put to more profitable use. And, because the wrapping material used weighs far less than cardboard containers, machine bundling makes appreciable savings in shipping costs.

These machines can be adjusted to accommodate different sizes of packages. They make a strong, firmly-sealed wrap, using heavy kraft paper in either plain or printed form. End seals may be attached, if desired. The packages can be assembled by the machine in a number of different group combinations, thereby making it possible to adopt the most practical bundle for shipment.

Consult our nearest office

Machine bundling has proved to be a welcome source of economy for many nationally-known manufacturers . . . Perhaps you, too, may be in a position to profit by it. Why not consult our nearest office for full particulars?

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Springfield 7, Massachusetts

30 Church St., New York 7 • 111 W. Washington St., Chicago 2
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18 Dickens Ave., Toronto 8

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

Production Forum

By Francis Chilson
Industrial Consultant

Labor Relations

From time to time over the past few months I have had occasion to make a few remarks about labor relations. It was never my intention to supply answers because I don't know the answers. In these little essays from time to time, all I hoped to do was to stimulate thinking and possibly to correct some bad thinking that has been widely publicized.

On this subject my mail has been interesting. I am accused of being a communist. I am accused of being a visionary. I am accused of being a namby-pamby who would give everything to labor and leave nothing for the employer. But most of all, and I should say, perhaps the most frequently of all, I am accused of being a fat-headed sentimentalist whose sympathies concerning the people who make four thousand dollars a year or less have run away with him.

A letter on the desk before me is typical of those which have castigated me for being too sympathetic toward the little man. The man who wrote the letter was vice-president of a prominent company. He had much to do with developing that company. Fired. In a shower of sympathetic tears for himself, he accuses me of being too sympathetic toward the little men who wouldn't have any jobs at all if it weren't for the big men like himself who make industry possible through their inventiveness, their aggressiveness, their imagination, their fortitude, and their money. This letter goes on to say that it is far more important to provide security for the top men in every organization than it is to provide it for the small fry at the bottom, because if there is not security at the top there can be none at the bottom and when a top man loses (possibly through no fault of his own) his job, he has a hell of a time getting a new connection at the salary to which he has grown accustomed.

With this I agree. It is one of the oddities of human nature that when a man is in the saddle and is doing a magnificent job, all who know him praise him highly. Should his horse stumble and he be thrown out of the saddle on his ear, everyone immediately reacts with a surge of sympathy, but such is human nature, that not a single person will come forward to lend a hand to help the fallen. In the cold grey dawn, after the speeches and praise are over, everyone sits back and wonders why Mr. Big's horse stumbled and why he was tossed out on his ear. Those who have jobs to offer, who may badly need ten or twenty or thirty thousand dollar a year men, will suddenly become very shy and reticent about coming forward with offers to the fallen man.

I remember the case of Mr. X, upon whose "retirement," a widespread feeling got about the trade that he had been forced out. It was generally agreed that he had been largely responsible for the growth of his company. In no time at all a testimonial dinner was given him. There were speeches by leaders of the industry. Everyone swore by the eternal gods it was an outrage that such a man should have been tossed out in the prime of his life. Everyone stated in the enthusiasm of the moment and in the heat of the Manhattans that it would be no time at all before a competitor of this man's company would snatch him up.

And the gentleman, who was a good friend of mine of long standing, later confided in me that he would have been delighted to have had an offer. Month on month went by and not a single worthwhile company even approached him indirectly. The reason was simple: everybody in the cold grey dawn of the aftermath sat back and wondered why such an extraordinary man should have been forced out. Everybody reasoned that such things do not happen without a reason. Since, no one could discover the reason, no one came forward with an offer of a job that was commensurate with this man's abilities and experience.

The man is dead now and I know that he died heartbroken—not so much because he lost the job which had made him famous in the trade, but simply because not one of all those prominent men who had called him friend came forward with an offer. It would have assuaged his pride, even though he had not accepted it.

Try "SLUGGING" OR PRECOMPRESSING

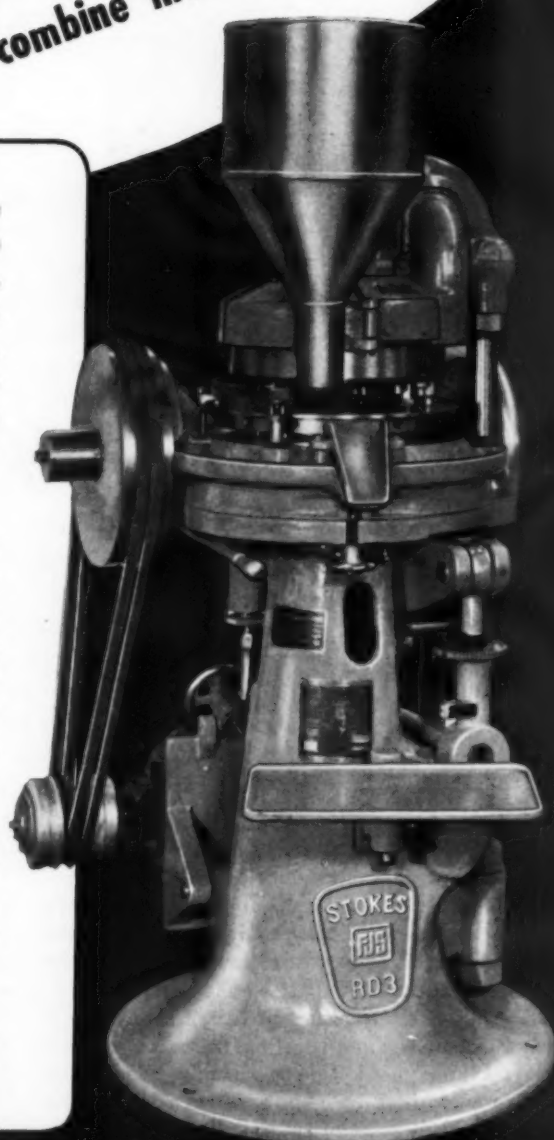
to combine incompatible materials

Your Stokes D-3 Rotary Tablet Machines are ideal equipment for preparing granulations by the "slugging" method . . . often the best, in many cases the only satisfactory method, because it eliminates wet mixing and drying, simplifies the problem of combining incompatible materials and is successfully used in handling heat- and moisture-sensitive and other troublesome formulas.

Your D-3 machines were developed especially for handling fine powders, are heavy and rugged, have a variable speed drive that makes quickly available the most efficient operating speeds for making both "slugs" and finished tablets. They are equipped with our patented Excess Pressure Release to prevent possible damage in precompressing operations.

For further information on precompressing methods or other help on tabletting or preparation of materials or care of machines, write us. Ask for booklet "Tips", to help prolong the life of punches and dies and tablet machines.

F. J. STOKES MACHINE COMPANY
5932 Tabor Road Olney P. O. Phila. 20, Pa.



F.J.Stokes TABLET MACHINES PHARMACEUTICAL EQUIPMENT FJS Est 1895

Still in spite of all this, I have little sympathy for the executive who makes more than four or five thousand dollars a year because I feel that when a man reaches a point of responsibility in life where he can begin to lay a few dollars aside—or should begin to lay a few dollars aside—he should provide for his own future. It helps maintain his independence of spirit and hence his value to his company. I know that this is not the way people do things, and I feel genuinely sorry for the big time man who, at a time in his life when it is not easy to find another connection, finds himself without a job. Still my real sympathies are all for the small man whose circumstances and opportunities have never made it possible for him to build up a bulwark against the "fell clutch of circumstance."

The Construction Situation

To build or not to build these days, ah, that's the question! From all quarters of the compass one hears stories of factory buildings entirely completed except for lighting or plumbing, or some other accessories, without which the buildings cannot be operated. A profound pessimism exists as to whether a new building can be completed within two or three years.

While, traveling about the country I have seen a great many unfinished new factories, I also have seen some finished ones. I have talked with builders who have completed large projects within the past year. In practically every case the story was the same: That if it hadn't been for strikes and other delays the buildings would have been finished months sooner.

It does not seem reasonable to me that the present situation can long continue. After all, employment in this country during the past year was almost at the war time peak. In spite of all the strikes, which never at any time affected more than 10% of the working population, the remainder of the working force must have produced vast quantities of materials of all kinds. These materials apparently went into hiding awaiting the end of price controls, or were in part shipped abroad. But it is my feeling that a large amount of this material is still available in warehouses now. In 1947 I think the log-jam will be broken. There are signs which indicate that anyone who starts a building project in the spring will be able to complete it within a normal period of time. I realize that "normal" is subject to broad interpretation because it is true that labor today is by no means as efficient as it was before the war. Brick layers, who several years ago were required to lay 3,000 bricks a day on a stright wall, are now only required to lay 1,000. Labor is laying down on the job. But even this, I think, will pass as it apparently is only a reflection of the distemper caused by strikes and the politics of peace.

In contemplating a new building project, naturally everyone wishes to get some idea in advance of what the building is likely to cost. Through first hand experience in the past year, and through contacts with firms in the building trade, I have prepared some rough figures which I think cover the present situation adequately. For what they are worth I pass them on to you:

Laboratory buildings, tile lined, completely soundproofed and air conditioned and equipped with all of the multifarious services that research chemists require will cost between $20 and $25 a square foot. This is the most costly type of building known because of the enormously expensive services which are required in each laboratory.

Grade A manufacturing, packaging and office space, which consists of tile walls, soundproofing and air conditioning, will cost between $12 and $18 a foot. This, of course, includes the cost of partitions, the air conditioning equipment, the lighting, plumbing, etc., but such a figure, while it will include power wiring to the panel boxes will not include process piping, etc.

Grade B manufacturing space, which is neither sound-proofed nor air conditioned, and consists of fireproof construction with masonry walls, factory sash, fluorescent lighting, etc., will cost, with all lighting, power lines and plumbing included, between $7 and $8 a square foot.

Grade C space, which is common warehousing with cinder block or cement block walls, steel truss construction and insulated roof will run between $5 and $6 a square foot. These figures definitely are on the high side, but if you are going to build, however, it is better to over estimate than to be disappointed.

Don't expect any substantial reductions. With labor rates as they are—and they are likely to go higher—there is no possibility of a substantial decrease of building costs within a five year period. Some builders say not within ten because building costs contain such a high labor factor. Such costs break down about as follows:

Labor—between 40 and 50%.

Materials at the mills,—between 20 and 25 per cent.

Freight and trucking, etc., of materials to the site—between 10 and 15 per cent.

Architectural and engineering fees, contractors overhead and profit—between 15 and 20 per cent.

Grading, preparation of roadways, parking areas, running in sewer, water and power lines, between 2 and 4 per cent.

These figures have been checked by several builders and all are pretty much in agreement with respect to the labor element. It is obvious that no reduction can be expected in labor costs. Certainly no reduction can be made in the cost of shipping and hauling the materials to the site. Likewise, the builder's overhead, profit and the engineer's and architect's fees cannot be reduced, so about the only place a reduction can come is in the cost of the materials, and, since the total material cost of the factory building is only about a quarter of the total construction cost, any reduction that may come here will have little influence in the final cost of construction.

So if you gotta build, you gotta build, so you might as well make up your mind that it is going to cost you more dough than it ever did before.

Pure Water at a FRACTION Of Distillation Costs

Want to convert raw water into pure water, *meeting your own particular requirements,* at a fraction of the cost of distillation?

The Dorrco D-I System produces specification water, equivalent to distilled water in purity, in amounts of a few gallons a day for laboratory use, or in quantities of millions of gallons daily for large plants. *The Dorrco System delivers the exact degree of softness, purity, or mineral content required for your use.*

The Dorrco unit (as shown in photograph) is complete, compact, self-contained and delivered ready to connect and operate.

SIMPLE OPERATION The Dorrco D-I System employs a silica-free exchange material of high mechanical and chemical stability, designed for long "runs" between regeneration. Operation periods between regeneration may be selected to coincide with availability of operators.

APPLICATIONS The Dorrco D-I System is applicable to all process industries in which water purity is a factor—food processing, pharmaceuticals, rayon manufacture, pulp and paper, dye-making, ceramic ware, and others. It is used to remove simple hardness, to reduce bicarbonate alkalinity, for reduction of total solids, and for the recovery of valuable metals from waste water.

COST Exact costs vary with the mineral concentration of the raw water, ranging from 2¢ to 20¢ per 1000 gallons with the Dorrco D-I System, as compared to 65¢ to $8.00 per 1000 gallons for distilled water.

Dorrco D-I Unit installed at Holland Rantos Company, Inc., New York City

HOW IT WORKS

Complete deionization is usually carried on in two steps. The firststage (cation exchange) passes raw water over a bed of exchange material which removes the calcium, magnesium, sodium and other metallic ions. The chlorides, sulphates, nitrates, etc. are converted to their corresponding acids. The second stage (anion exchange) removes these acids, producing a water equivalent to distilled water.

The cation exchange is regenerated with commercial sulphuric or hydrochloric acid and the anion exchanger is regenerated by an alkali—usually soda ash.

A Dorr Company engineer will gladly give you full details on the Dorrco D-I System. There is no obligation. Telephone or write our nearest office.

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DORR

RESEARCH ENGINEERING EQUIPMENT

Report on Tablet Counting

You may recall my description of a vacuum tablet counting device in which I owned a half interest. I told you some time ago that an experimental model revealed two deficiencies: one, a tendency to pick up more than one tablet on each apperture; two, a tendency to miss a tablet occasionally.

To my mind a tablet counting machine is not a counting machine at all unless it counts perfectly. So I sold my interest in the patent to the co-inventor, who is the President of Dadson Corporation of New York, and at long last the machine is now being thoroughly tested and there appears to be some reason to hope that the tendency to miss a tablet occasionally and also the contrary tendency to pick up more than one tablet per apperture will be corrected. However, machine industry conditions, being what they are, a successful tablet counting machine seems still a long way off.

You may recall at the recent Packaging Show that a so-called electronic tablet counting machine was demonstrated. This was a fluke. Thus far I have not heard of a single successful installation. Several years ago I tried a somewhat similar combination of Syntron vibrators. By using corrugated troughs and brushes, I was able first to separate the tablets into parallel lines. The lined up tablets were then discharged to the corrugated trough of a second vibrator mounted below the first one and operating at a higher frequency. This separated the tablets very nicely and gave an interval of space between them. The idea was that the separated tablets were to fall off the end of the second vibrator and each individual stream of tablets would be intercepted by a photoelectric beam operating a counter. So far so good. I fell flat on my face when I tried to devise means of feeding the bottles automatically and of controlling the tablets falling from the second vibrator into the container feeder. As in all cases where a tablet is permitted to fall through an air space, however short, control is lost and accuracy of count becomes difficult, if not impossible. That is why counting devices working directly from tablet presses are never accurate. Regardless of how fast a flipper works, there will always be cases where the flipper is a hundredth of a second too late, and in consequence, one bottle will have less than the count while the next one will have more.

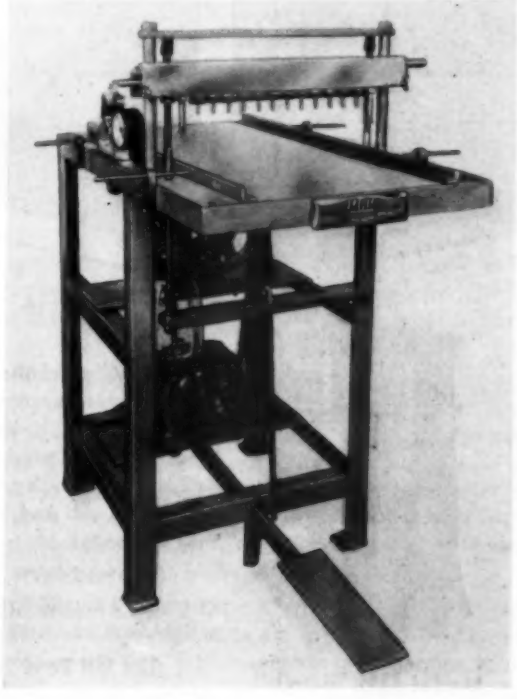
A second difficulty arose in connection with the vibrators mentioned above in that even after the tablets were counted, the bottles had to be moved individually. It was not possible to line up the tablet bottles "company front" so that they could be filled simultaneously and moved into or out of position as a unit. The interception of the light beams was never simultaneous and one bottle would always receive its full count a fraction of a second ahead of its neighbor, just as in vacuum filling a group of bottles, some will fill up quicker than others in the same line.

So all in all, nobody has yet reached first base in developing a tablet counting mechanism that will be completely adaptable as to tablet size, shape and count, and equally adjustable with respect to bottle size and shape.

Possibly we are barking up the wrong tree. Maybe we should sell tablets by the ounce instead of by count.

Tray Filler

"Tru-Fill"—New Rapid Filler for Small Containers. The MRM Company, of 223 East 106th St., New York announces that deliveries are being made on their unique new rapid filling machine for containers of perfume, nail polish, toilet preparations, drug sample bottles, and all small container filling jobs. The "Tru-Fill" is a specialized Tray-Type Filler with an operating speed of 100-160 containers per minute, efficiently handling from fractional-ounce to two-ounce containers. There are 12 dripless spouts, a height-adjustable



spout bar stainless steel contact, and welded steel construction. A single operator is needed to work the "Tru-Fill" via its foot treadle for lowering the filling head, plus hand feeding of trays. A product of MRM's engineering design, the "Tru-Fill" presents new speeds plus a higher degree of cleanliness achieved by the constant vacuum system. The "Tru-Fill" Tray-Type rapid filler fills directly from any type floor-level reservoir. Designed to answer recent demands, MRM's new specialized filler eliminates the old hand operation equipment while creating production-plus operation speeds.

Package Machinery Improves

Basic improvements and refinements made by company engineers during war years now contribute im-

US

Manufactures Machines For

NET WEIGHING
GROSS WEIGHING
PACKING
PACKAGE FORMING & FILLING
CARTONING
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PAPER BOX FORMING
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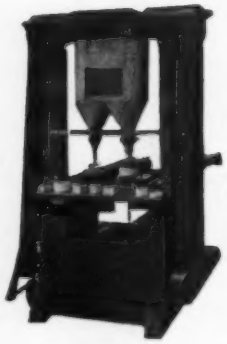
. . . they chose US

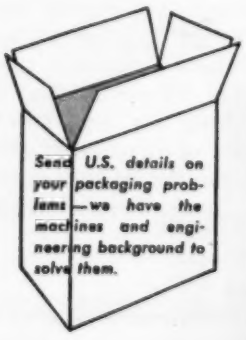


Model MH "BOND" Semi-Automatic VOLUME FILLER, WEIGHER OR PACKER

The fillers of the bottles illustrated chose the MH Bond Semi-Automatic Twin Station Filling Machine because they use a great number of container sizes in packaging a wide range of materials. The MH Bond can be easily and rapidly converted to suit each of these numerous products and containers. It is the ideal machine to volume fill, gross-weigh or pack such products as ground spices, powdered drugs, talcum, flour, soap powder, cocoa, etc. And, the MH can pack each in the most desirable containers—whether they are boxes, cans, bags, jars, envelopes or cartons.

The model MH is a speedy and precise twin station machine requiring but one operator. It can fill up to 40 containers per minute, with negligible variations in the packed weight.

The MH Bond is but one of several filling machines manufactured by **US**. Other models include semi-automatic and automatic, one, two, and four station machines—among them is the most profitable solution to your packaging problem—write **US** today.



US Automatic Box Machinery Co. Inc.

Owning and Operating

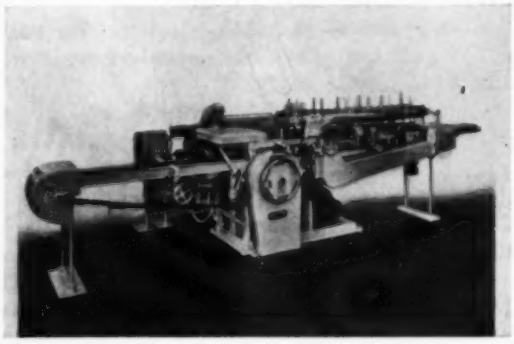
NATIONAL PACKAGING MACHINERY CO. & CARTONING MACHINERY CORP.

18 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: NEW YORK CLEVELAND CHICAGO
LOS ANGELES (KRUGH EQUIPMENT & SUPPLY CO.)

portantly to the flexibility of use, ease of operation and production efficiency.

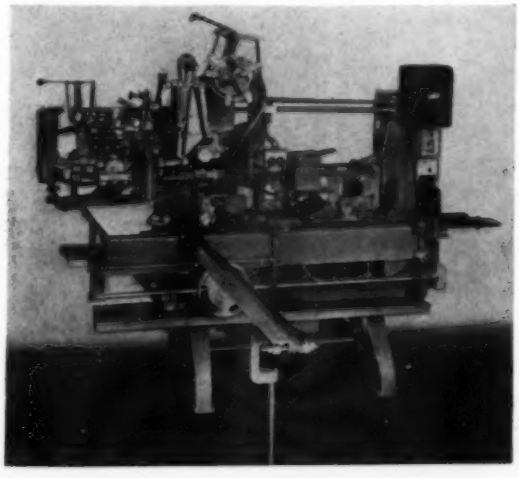
Of the accumulated advancements made in the packaging industry, two of the recently designed machines of the Package Machinery Co. incorporating these advantages are of particular significance in the current trend. First, for improvement of appearance and pro-



tective qualities and second, the increasing or accelerated program of machine packaging of heretofore hand packaged items.

The automatic wrapper known as Model No. FA-2-T, uses cellophane, glassine, sulphite or bond paper, and by the incorporation of a static eliminator, may also employ acetate or similar film materials

Flexibility of package sizes makes for wide use of this type machine. Sealed and delivered for carton packing, the items may vary in length from 4¼ to 12 inches; 3 to 7½ inches in width; and from ⅞ to 1½ inches in height or thickness. The articles, which are first placed on a card, are then automatically fed into the wrapping machine by an infeed chain conveyor.



Side and bottom folds are made separately, but the heat sealed ends are formed in one operation. Pre-printed brand or trade names are automatically registered in correct position through use of an electric eye mechanism which is a built in feature of the machine. Another desirable feature incorporated in this machine is a magazine-fed mechanism to affix various medallions to wrapped packages for the purpose of identification of price, size, company or a special customer brand name. Handling a variety of package sizes and designs is quickly accomplished by means of readily interchangeable parts.

The second in a series of recent Package Machinery Company developments in wrapping equipment is the Model CA-2. This machine has found ready acceptance by the drug, candy and cosmetic manufacturers. Among the chief ingredients of its engineering advancements is the available and inherent protection against atmospheric penetration to a remarkable degree because of the use of laminated foil as a wrapper. This type wrapper is a large contributing factor in prolonging the safe and salable life of many items, such as vitamin tablets, candy and many other items subject to severe climatic, sanitary and shipping conditions.

Larger Mikro-Atomizer

A new No. 8 Mikro-Atomizer, capable of producing ultra-fine powders in the range of 1 to 25 microns (under 325 mesh) in size, in large production quantities, has just been announced by the Pulverizing Machinery Co., 50 Chatham Road, Summit, N. J., manufacturers of pulverizing equipment.

Using a 75 h. p. motor, this new mechanical screenless pulverizer is particularly applicable to tonnage operations. Capacities in the range of 2,000 to 8,000 pounds per hour, depending upon the material being ground, are obtained with this new large production unit.

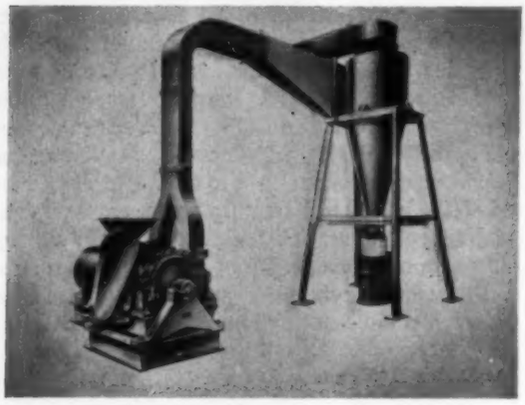
Although having approximately four times the capacity of the No. 6 Mikro-Atomizer, which was introduced about two years ago, this new unit retains all the features and basic principles which have made these new type pulverizers so popular in a varied number of applications. Guaranteed control of particle size is offered as with the smaller machine. Operating temperature seldom exceeds 115° F.

Compact and efficient, the New No. 8 Mikro-Atomizer discharges into a stainless steel dust collector. Rotary air lock for continuously discharging material from the cyclone, is supplied. A number of modifications of the No. 8 machine are available to accommodate the wide range of different materials for which it is recommended.

The basic principle of operation lies in separating and recirculating the ground particles by a balanced reaction between centrifugal force and air flotation or aerodynamic drag in such a way that the smaller particles which meet the size specification are discharged from the mill while the larger sizes are retained in the grinding section for further reduction.

Ground material in the mill section is thrown radially outwa d by the centrifugal force generated in the whirling particles by the rotor into the path of an air stream created by a built-in fan. This centrifugal force imparted to the coarser particles resists the air drag and reject them back into the path of the impact mem-

bers; the air drag on the small particles overcomes the centrifugal force and delivers them from the machine. The point of balance between these two opposing forces, and therefore, the control of the maximum size



of the delivered pulverized particles, lies in the regulation of the relative velocity of the air stream.

The mill is of duplex construction insofar as it embodies on each side of the single centrally located rotor one dispersion ring, one separator wheel and one fan, but all assembled on a single drive shaft and one composite housing.

The entire mill housing assembly is split into halves, the upper half swinging easily on substantial hinges. The rotating members, all on one shaft, may then be lifted away from the lower housing. All parts which contact the material being ground are highly finished for quick cleaning. Stainless steel construction of the rotating members eliminates corrosion and contamination. Body castings are all special nickel-iron alloy which takes a high polish and which is very resistant to corrosion.

Selas Separation Folder

An illustrated folder which describes a new equipment for complete phase separation of immiscible liquids has just been published. It contains photographs of the unit, a cross-section flow diagram, dimension drawings, a description of operation and possible uses.

Copies can be obtained from the Selas Corp. of America, Erie Ave. and "D" St., Philadelphia 34.

American Made Postwar Microscope

Federal Manufacturing & Engineering Corp., of Brooklyn, N. Y., has announced a new Model 40 Standard Microscope to retail for $59.

The "Federal 40" microscope incorporates many features usually found only in much higher priced instruments. It is equipped with two Huygenian eyepieces (5x and 10x standard Society diameter) which are scientifically tapered to afford close eye approach, reducing to a minimum interference with the field of vision. The microscope will accommodate all standard eye-pieces.

Convertible (10x-20x) achromatic objective can be changed from high to low power by a flick of the finger. Precision lens corrected for chromatic and spherical aberration provides great clarity of detail. Standard Society thread permits interchange with other standard objectives.

Direct reading draw-tube provides an additional means of instantly varying magnifying power of the instrument. Indices (1.1x-1.2x-1.3x-1.4x-1.5x) clearly marked on tube. Removal of draw-tube from barrel is prevented by a safety catch.

Magnification range of 50x to 300x may be still further extended by using additional standard eyepieces or objectives, all of which are interchangeable with lenses furnished with the instrument.

Coarse and fine adjustments are combined on one shaft, and are mounted on opposite sides of the instrument. Coarse adjustment is rack and pinion type. Fine adjustment is ball bearing friction type. Safety feature on fine adjustment prevents execssive pressure if the objective should contact slide. Objective-tube secured against casual removal.

A bleeder hole in the lens mount vents trapped air from the barrel so that the eye-piece seats immediately when inserted into draw-tube—also prevents ocular from popping out when draw-tube is suddenly lowered.

Other standard features included are: 1. Full size stage with slide-clips. 2. Optically ground, larger size,

concave mirror on swivel, mounted sub-stage. 3. A six aperture, pivoted, sub-stage diaphragm. 4. Full tilting, stable frame and base with stops for vertical and horizontal positioning.

Prestige for your Products

LABELED by

PONY LABELRITE*

*Registered U. S. Pat. Off.

When you sell the Well-Groomed market, you *should* have a well-groomed product. Make sure of the finest appearance by labeling on the Pony Labelrite.

YOU LOSE 3 WAYS IF YOU DON'T "LABELRITE"!

By paying *extra* help to wipe off excess adhesive that seeps from beneath labels.

By running the risk of loose label edges that mean torn labels.

By risking faulty register that impairs the impression of Quality.

Never any excess adhesive to mar its appearance ...or to "wipe off"

... due to the "twin-roller" micro glue control which applies a tissue-thin film of adhesive with full-surface gluing.

Always perfectly registered with ALL edges glued down!

because VACUUM holds labels rigidly and continuously from pick-up through glue-roll contact to applying point, in straightline stroke from hopper to container.

Fine Labeling Identifies Finer Products!

NEW JERSEY MACHINE

corporation

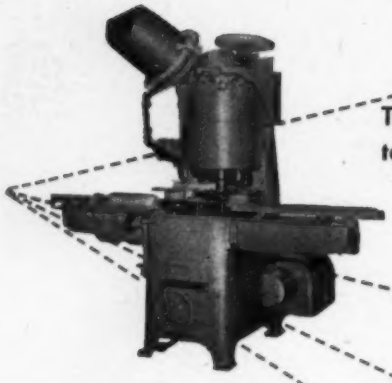
1550 Willow Ave. HOBOKEN, N. J.

Chicago Office — 325 West Huron St.

Cincinnati Office — 1701 Carew Tower

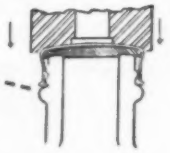
HERE'S WHAT MAKES AN R-O SEAL

You receive plain-skirted, unthreaded Alseco Seals decorated to your design.

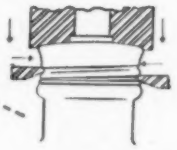


These caps are automatically applied to the container by this and other types of Alseco machines.

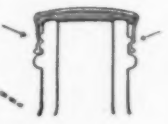
HERE'S HOW...



Under pressure from above, the cap is held down tight on the bottle lip embedding the lip firmly into the cap liner.



While the cap is held down tight on the bottle, rollers move in and *roll-on* the threads of the cap.



Because these rollers are mounted on spring-centering arms, the cap threads follow *exactly* the contour of the glass threads.

The R-O Seal is tight because it is *tailor-made;* leakage and evaporation are eliminated. Yet, feminine hands find R-O's easy to open.

Let us help you solve your packaging problem. We can offer you 32 years of successful sealing experience.

ALSECO

SEALS AND SEALING MACHINES

ALUMINUM SEAL COMPANY · · NEW KENSINGTON, PENNSYLVANIA

SUBSIDIARY OF ALUMINIUM COMPANY OF AMERICA

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3—A revised and greatly expanded directory of the principal sources of supply for machinery and equipment, packages and packaging materials, chemicals, perfume materials and raw materials used by the industry.

4—Comprehensive catalogue section of the principal suppliers to the industry, including equipment and package manufacturers; and manufacturers, importers and suppliers of chemicals, essential oils, perfume materials and all other raw materials used by the industry.

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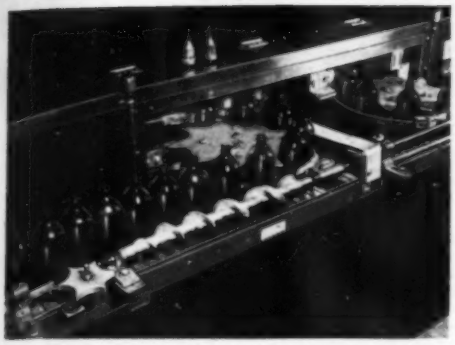
ANOTHER H-E UNSCRAMBLER AND POCKET WASHER INSTALLATION

SMOOTHER GLASS HANDLING AT DUFFY-MOTT

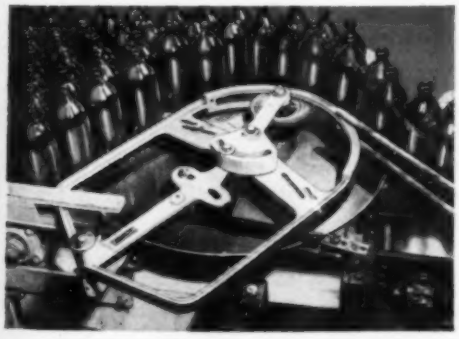
Duffy-Mott joins the growing list of packers and bottlers equipping their plants with Hartford-Empire Pocket Washers and no-jam Unscramblers. Glass container handling is efficient, quick and economical with H-E equipment. Duffy-Mott today delivers bottled prune juice in containers that sparkle with sales appeal—at reduced cost.

This H-E combination should be in your plant. It quickly pays for itself in reduced costs and increased production. For details of how H-E equipment can do this in your plant, write for illustrated folders.



EFFICIENT PRE-HEATING AND WASHING AT DUFFY-MOTT

The Hartford-Empire Pocket Washer pre-heats and washes, handling each bottle individually, at speeds up to 300 per minute. Bruising contact is eliminated in this fully automatic H-E Pocket Washer. No attendant is required.



NO-JAM UNSCRAMBLING IN THE DUFFY-MOTT LINE

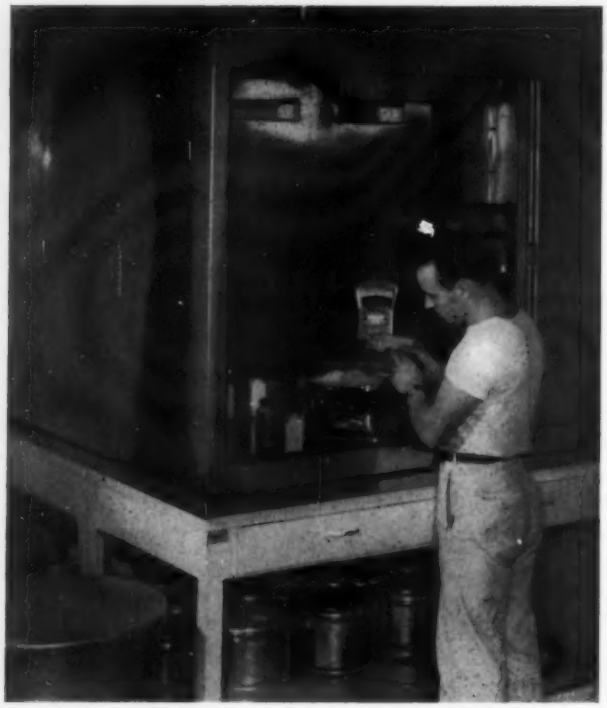
Duffy-Mott is sure of an uninterrupted line of bottles. H-E's exclusive unscrambler feature, the oscillating guide, delivers a continuous full line of bottles at the filler. Damaging impacts cannot occur.

WHY GLASS CONTAINERS ARE EASY TO HANDLE

Hartford-Empire equipment is often the answer, and there is good reason for it. At 411 Homestead Avenue in Hartford are the experimental glass plant, the chemical and physical laboratories in which H-E Research, Development and Engineering men work. "411" is equipped with complete facilities for practical and thorough studies of glass manufacturing, glass packing and bottling problems. All efforts here are directed toward the creation of more "Hartford Helps" for glass manufacturers and their customers.

HARTFORD-EMPIRE COMPANY

333 HOMESTEAD AVENUE
HARTFORD 2, CONNECTICUT



Compounding . . . Color Control . . .

In more than sixty major industries served by EXACT WEIGHT Scales none pays greater attention to accurate compounding to formula than do drug and cosmetic technicians. And this fact is paramount . . . the better the technician the more he relies upon his equipment rather than his skill. Uniform drug products and the same delicate color shades in cosmetics don't just happen. Back of these results are EXACT WEIGHT Scales over which these formulae and color blending job were done to fraction-ounce or gram or grain accuracy. If you compound or color blend do it the EXACT WEIGHT Way for the same results every day.

EXACT WEIGHT Shadograph—a revolutionary new principle in precision weighing, substituting a light ray for mechanical indication. Electrically operated, noiseless in use, high speed operation, extremely high accuracy. Ideal unit for fine compounding of exacting formulae. Excellent equipment for high speed production line checkweighing. Unit can be supplied with scoop or platter as ordered. Capacity and visible accuracy to specifications of the operation.

INDUSTRIAL PRECISION

Exact Weight Scales

THE EXACT WEIGHT SCALE COMPANY

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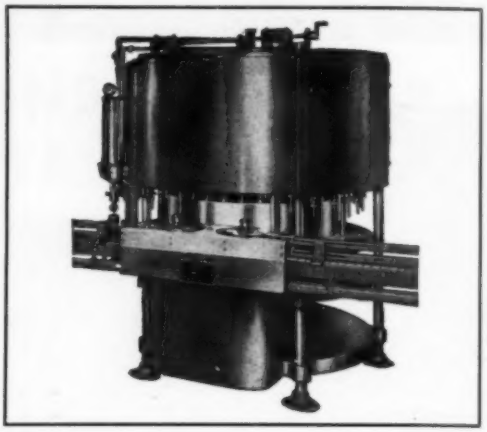
Dept. AK, 783 Yonge St., Toronto 5, Canada

CAPACITY UP TO 130 CONTAINERS PER MINUTE



U. S. ROTARY VACUUM FILLER

for **HANDLING LIQUIDS** *and* **SEMI-LIQUIDS**

Fully Automatic U. S. Rotary Vacuum Fillers are built in a complete line of machine sizes to handle any type of liquid and any size containers up to gallon size. Can be operated at variable speeds with capacity up to 130 containers per minute.

Each machine in this line represents the finest in filling equipment construction and time-tested engineering for highest filling efficiency.

U. S. Rotary Vacuum Fillers with post-war additions are illustrated and described in newly prepared literature. Write for "Rotary Filler Details."

OTHER U. S. FILLING UNITS: *Semi-Automatic Model B-2 Vacuum Filler and U. S. Siphon Filler. Both embody latest engineering refinements. Write for Bulletins.*

U. S. BOTTLERS

Machinery Co.

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CONVEYORS
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FILLERS

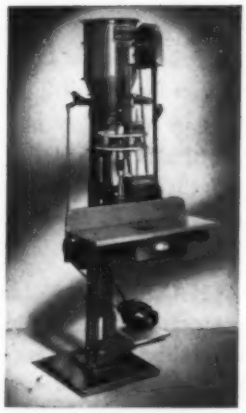
Profitable Productive Packaging

with

TRIANGLE

VOLUMETRIC FILLERS

accuracy
simplicity
versatility



Foot powders—face powders—borax crystals—insecticides—this TRIANGLE Model SPA Volumetric Filler packages them neatly, accurately and economically. Quickly and easily adjusted to handle a wide variety of dry products for packaging in bags, jars, envelopes or cartons. One operator can produce from 30 to 60 packages per minute, in sizes ranging from 1 to 16 ounces. Equipped with an automatic plunger which assures positive discharge from measuring chambers. Write for literature.

An improved, inexpensive table model machine—the TRIANGLE P-1 Volumetric Filler—designed to package all types of powders in various style containers. Available in several different models for handling packages from ¼ ounce to 16 ounces, at a rate of 20 to 50 packages per minute. Simple adjustments provide for changes in filling speed or volume of materials. Easy to operate and easy to maintain, this is an ideal machine for speedy, efficient, low-cost packaging. Write for literature.

TRIANGLE also builds a complete line of high-speed automatic and semi-automatic weighers, fillers and carton sealers. Ask for detailed information.

TRIANGLE PACKAGE MACHINERY CO.

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For A Sparkling Brilliant Product

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That's why so many leading manufacturers add these sales building features to their products by using Alsop "*Sealed-Disc*" Filters. What's more, many enthusiastic users have reported obtaining these superior features and with considerable savings in production time and cost.

"*Sealed-Disc*" Filters are available in a broad range of sizes and capacities to meet varied filtration requirements and processing methods.

Let us send you a copy of our bulletin #745, it gives complete details.

You'll find the "*Sealed-Disc*" Filter ready for instant use, completely sealed, eliminating loss of liquid from leakage or evaporation, portable and easy to clean for use on different liquids.

ALSOP ENGINEERING CORPORATION

Filters, Filter Sheets, Pumps, Tanks, Mixers, Agitators

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In addition to the discs for our own filters, we can supply discs or sheets cut in any shape and size to fit other type filters.

A corner of our Test Grinding Department

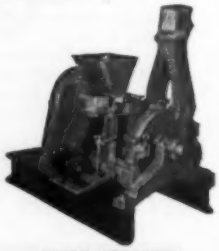
Is finer grinding a problem with you? More uniform particle size? Less variation in your mixtures of pulverized materials? Lower milling costs? If these things have become a "headache" with you, here is a proved "prescription" for a solution to such problems.

1. **Send for your copy of our Confidential Test Grinding Data Sheet.**
2. **Upon receiving it, fill it out completely, returning it to us with a production sample of the material you desire to grind.**
3. **Your information will be carefully checked in our Laboratory against the data and experience gained through the making of over 43,000 tests on all kinds of materials, during the past 23 years.**
4. **Your material will then be given carefully tabulated test grinds on regular production MIKROS in our Test Grinding Department.**
5. **A complete report will then be rendered to you outlining the proper procedure for your operation, giving you full information as to our findings.**
6. **Definite recommendations will then be made as to the proper size and type of equipment you should use in your operation complete with adequate performance guarantees and specifications, based on the study of these test results.**

This procedure can provide you with an unfailing guide to improved pulverizing operations in your plant . . . a recommendation that will give you the only practical basis to keep fine and ultra-fine grinding from becoming a "headache."

SEND FOR
copy of new 48-page illustrated
MIKRO-PULVERIZER and **MIKRO-ATOMIZER**
Catalog

MIKRO-PULVERIZER



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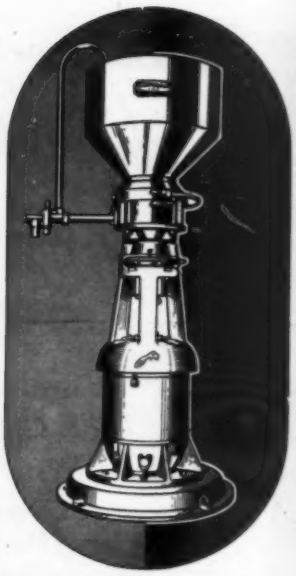
PULVERIZING MACHINERY COMPANY
22 CHATHAM ROAD • SUMMIT, N. J.
NOW...2 TYPES TO MEET MOST PULVERIZING NEEDS

MIKRO-PULVERIZER (FINE) **-ATOMIZER** (ULTRA FINE)
Reg. U. S. Pat. Off.



TWO PROCESSING MILLS IN ONE

1. *An Eppenbach High Speed Wet Grinding and Colloid Mill* will reduce the size of solid particles to microscopic dimensions and effect their instantaneous dispersion in fluid or plastic materials as consecutive operations in the same cycle.

2. Operation of the EPPENBACH COLLOID MILL requires neither training nor special skill—merely attention to simple directions. A calibrated dial registers adjustment of clearance between milling surfaces thus assuring higher uniformity of treatment.

EPPENBACH COLLOID MILLS are available in laboratory and production sizes. Capacities range from ½ to 3600 gallons per hour or higher. The principle of operation is the same for all sizes; therefore performance and capacity can be accurately predetermined by experiment with a laboratory unit.

EPPENBACH COLLOID MILLS can be adapted for pressure feed of viscous and semi-plastic materials. They are easy to dismantle for cleaning and sterilizing.

Write for Catalog No. 401 describing our equipment in detail.

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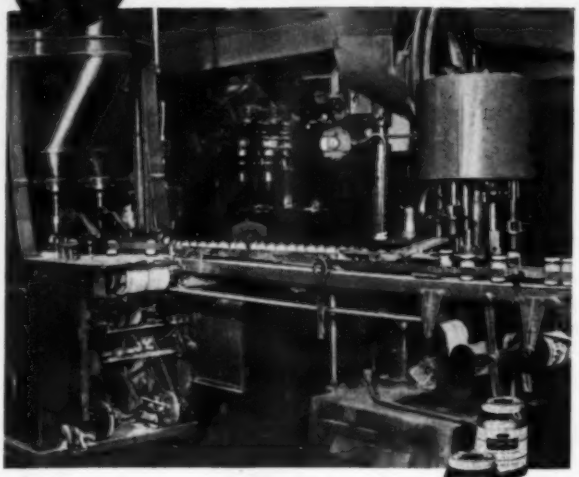
Processing Equipment for Over 30 Years

S&S at McKESSON & ROBBINS



The S & S HG-84 Duplex Heavy Duty Filling Machine answers their problems. Three sizes of jars are filled on one machine and fed into the automatic capping unit at the rate of about 60-72 per minute. While filling with speed and accuracy the HG-84 vibrates to insure complete fill.

The HG-84 can also be supplied with "Auger-Vac"—the auger-vacuum system for dustless fill and tight pack—is available in various types. It fills not only jars, but cans or other air-tight containers with pulverized coffee, powdered milk, ice cream mix, malted milk, cocoa or numerous similar products, in the amounts desired. Full particulars on request.

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FILLING - PACKAGING - WRAPPING MACHINES

"Better machines for better packages"

SEAMLESS

ONE PIECE DIE DRAWN STAINLESS STEEL

6 REASONS WHY YOU SHOULD OWN HUBBERT SEAMLESS KETTLES . .

*METHOD . . . Hubbert's methods are the best—not the quickest or cheapest, all kettle shells being properly heat-treated and hardened and specially processed to prevent corrosion.

EFFICIENCY . . . Hubbert Kettles are efficient—heat rapidly and evenly—due to proper steam distribution.

SEAMLESS . . . All Hubbert shells are seamless. Die Drawn from one piece of material. No welds to leak or corrode.

SANITARY . . . Hubbert Kettles are completely sanitary and easy to clean and keep clean. No cracks, holes or depressions where dirt may lodge. Hard and durable. Perfectly polished.

SAFETY . . . Hubbert Kettles are heavily constructed to withstand their rated working pressure *Plus.*

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Your MIXING or STORAGE PROBLEMS can be Solved with a STAINLESS STEEL SAN-I-TANK

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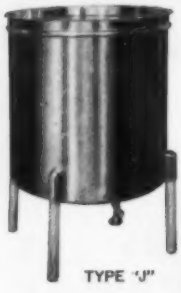
Regardless of what your chemical storage or mixing problem is, a San-I-Tank can simplify it for you—economically and safely. All San-I-Tanks are built by tank specialists. Constructed throughout of 18-8 Stainless with all welds ground smooth and polished. Completely self-draining, sanitary and rust proof. Many extras available such as covers, motors, agitators, etc. Let our engineers give you recommendations on your tank problems.


TYPE "J"

MANY TANKS IN STOCK FOR IMMEDIATE SHIPMENT — *Tell Us Your Requirements.*

We carry a complete line of stock sizes in San-I-Tanks. If we do not have a Standard tank to fill your need our Engineering staff is at your disposal to design and build a tank best suited to your requirements. If it's a tank problem, get in touch with Metal-Glass today,—we can solve it for you.

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- Durable
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- Eliminates spilling
- Simple to operate
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The most practical hand filler for creams, lotions and liquids.

Write for illustrated folder and prices

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LABEL PASTERS

FOR

BOTTLES-CARTONS-CANS

If your labeling problems are retarding your production and your profits—it's time for you to switch to POTDEVIN Label Pasters.
Thousands of manufacturers have increased their output by installing POTDEVIN Label Pasters along their production lines.

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Straight Line

Bottle Filling Machine

for **Gravity-Vacuum-Pressure**

One Machine—For 3 Uses

No Dripping—Negligible Overflow—High Speed

Universal Automatic Filling Valves
Fills all types of solutions: free flowing—heavy—foaming
Instant filling of liquid into bottles.
Exact adjustment to desired height in bottle.
All bottles filled uniformly
For all size bottles.
Made to meet your requirements.

Inquire about our ***Hand Operated Automatic Filling Valve, Bottle Cleaning Units, and Bottle Emptying Device.***

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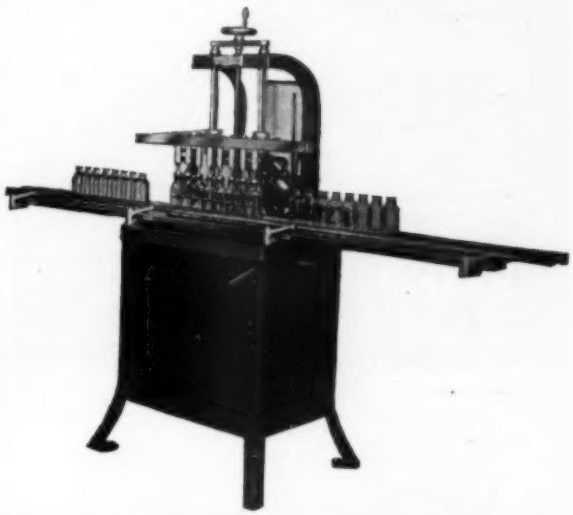
LATEST SEMI-AUTOMATIC VACUUM LIQUID FILLER

FILLS THIN-TO-VISCOUS LIQUIDS QUICKLY!

A desirable production output is now being attained with this new, efficient filler that fills 1 oz. to 1 gal. containers rapidly. Parts are few and inexpensive, operation smooth and consistent.



High Production Rate: Up to 100 Bottles per Minute

SOME LEADING FEATURES:

- Fully Automatic Overflow
- 8-10-12 Dripless Spout Sizes
- Hand Wheel Raises or Lowers Spout Bar
- All-Welded Steel Construction
- Easily Adjustable Stainless Steel Rail

"LET mrm VISUALIZE YOUR FILLING MACHINE!"

mrm COMPANY

Custom Designed & Built Fillers, Cappers, Conveyors

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PACKETING MADE EASY!

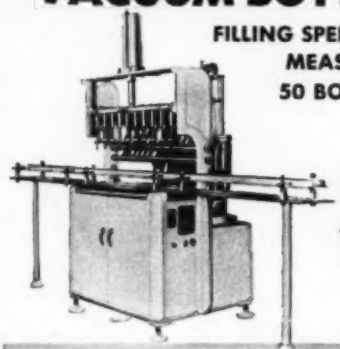
BY packeting dry free flowing materials — drugs, powders, pills, granules, and crystals — Brown Automatic Packet Filling Equipment has opened new markets and developed profitable sales volume for a host of manufacturers in the drug field. Brown Bag machines fill packets quickly, economically and uniformly, and keep down filling losses. Ask for details of this sales-stimulating method of merchandising your product.

BROWN BAG FILLING MACHINE CO.
FITCHBURG, MASSACHUSETTS

West Coast Reps.,
Peter D. Bowley & Assoc., 369 Fifth St., San Francisco, Cal.

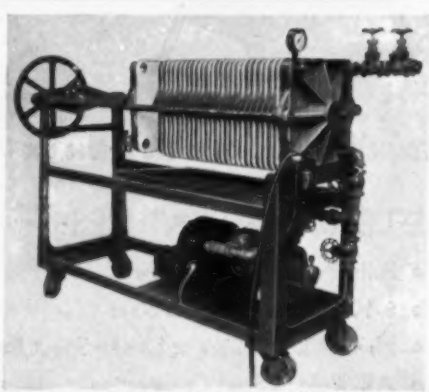
THE NEW ERTEL
"Pneumo-Vac"
VACUUM BOTTLE FILLER

FILLING SPEED
MEASURED IN QUARTS—
50 BOTTLES PER MINUTE



The "Pneumo-Vac" is operated by a balanced foot valve which allows the operator full use of both hands and reduces physical effort to a minimum. Drippage is positively prevented while unit is in operation. Liquid filling heights, for 3" to 13" bottles, can be quickly regulated. Illustrated "Pneumo-Vac" bulletin gives full information. Write for your copy.

ERTEL ENGINEERING
CORPORATION
KINGSTON NEW YORK
NEW YORK CITY SALES OFFICE AND SHOWROOM
40 WEST 48th STREET, NEW YORK 19, N. Y.



HORM FILTERS HORM ASBESTOS FILTER PADS

Horm Filters for filtration, clarification, polishing, are designed so that no liquid can by-pass the filter element. They are unsurpassed for drug, chemical and cosmetic preparations.

CLARIFLOW

- No rubber washers used
- Adaptable to all types of filter mediums
- Rapid change of filter pads
- Construction Stainless Steel or Bronze (nickel plated)
- Suitable for coarse and fine filtration, including germproof and ultra-fine

HORM ASBESTOS FILTER PADS FOR EFFECTIVE FILTRATION

STERILFLO

TRADE MARKS REG. U.S. PAT. OFF.

F. R. HORMANN & CO., Inc.
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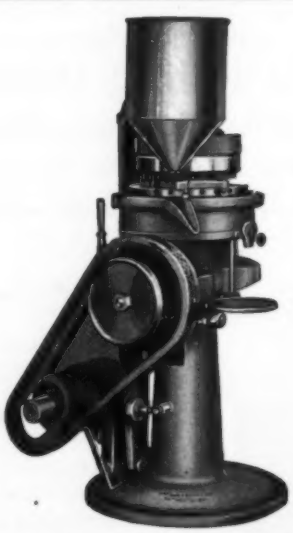
Plant: 30 Sea Cliff Ave, Glen Cove, L. I.



A NEW COLTON ROTARY TABLET PRESS
SERIES 200-25 ROTARY TABLET PRESS

The design of the Series 200-25 Tablet Machine is an outstanding engineering achievement, the culmination of years of experience in building tablet machines. This compact machine incorporates refinements that provide an entirely new standard of performance for this type of equipment.

ARTHUR COLTON COMPANY
2620 East Jefferson Established 1884 Detroit, 7 Mich.

NEW EQUIPMENT

for Immediate Delivery

VACUUM FILLERS—8-10-12-SPOUTS
will fill from 1 ounce to 1 gallon jars or bottles—45 to 60 per minute
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Riboflavin for Ocular Symptoms

The beneficial effect of riboflavin in relieving ocular complaints of aviators, prompted C. B. Smith (*Canadian Med. Assoc. J.* 54:589, 1946) to administer the vitamin to other patients with similar ocular complaints. Dosage of riboflavin was 5 mg. three times daily or oftener as indicated. Nineteen patients so treated were observed for from several months to 2½ years. Attacks had been suffered for from 2 to 10 years in 7, and longer in 12 cases. Sensitivity to light, tiredness of the eyes, aching eyes, sandy sensation under the lids, reading intolerance and decreased visual acuity were the usual complaints in one group of four patients. Complaints were less uniform in another group of 15 patients although light sensitivity was again the most characteristic. The 4 patients in the first group were relieved in a few weeks. Ten of the patients in the second group reported cessation of attacks, and five required continuous therapy to be free from attacks.

New Hormone Combats Peptic Ulcer

According to the *New York Times* for October 6, 1946, work done by a research team, including A. C. Ivy, H. Greengard, A. J. Atkinson and M. I. Grossman, has resulted in the discovery of a hormone effective in the treatment of peptic ulcer. Called enterogastrone, the hormone is derived from the mucous lining of the upper intestinal tract of freshly slaughtered hogs. The preparation has been used in the study of fifty-eight human patients, all of whom had severe peptic ulcers for at least five years. It also has been tried on forty-three dogs.

Many of the patients in the tests reported relief from their ulcer symptoms within a few days after injections were begun at the rate of one a day six times a week, found to be the most beneficial frequency. Most patients were free from distress after two weeks of treatment and in only a few cases, mostly patients who received fewer than six injections weekly, had it been necessary to wait as long as two months before relief from pain and discomfort was complete.

Definite improvement in the condition of the ulcer sufferers, as verified by X-ray examinations, had been recorded in most cases in two to five months. Some of the patients gained weight and were able to return to near normal diets for the first time in years, and many were able to discontinue treatment in six months to a year. Only one patient has failed to show improvement after a year of this therapy.

Avitaminosis and Peptic Ulcer

The experimental evidence gathered by H. Shay and his associates (*Gastroenterol.* 6:199, 1946) indicates that peptic ulceration may be encouraged by thiamen deficiency. They believe that gastric hypersecretion consequent upon acute severe thiamin depletion is the mechanism favoring ulcer formation. In their work it was noted that spontaneous gastric secretion is greatly increased in rats when thiamin chloride is withheld until body weight falls 25 to 30 per cent and signs of polyneuritis appear. Incidence and severity of gastric lesions in such animals are much higher than in rats supplied adequate vitamins.

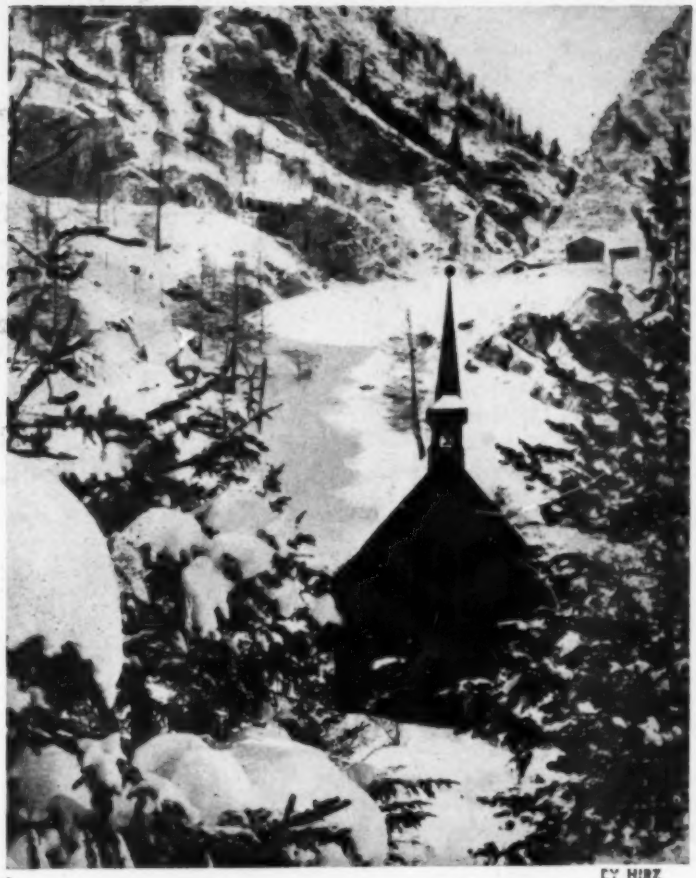
BCG Vaccine Against Tuberculosis

In an extensive review in *Public Health Reports* (61:1298, 1946), J. Holm states that in Denmark BCG vaccination of man has been employed since 1927. In the beginning years, however, it was carried out merely as an experiment of limited extent. It was not until about 1940 that vaccination with the bacillus of Calmette and Guerin was employed there extensively, but in late years it has been adopted as an essential weapon in the fight against tuberculosis. In Denmark the significance of the BCG vaccination has been appreciated widely, so that now such vaccination is rarely refused. In recent years, moreover, the vaccination has been applied to all tuberculin-negative soldiers in the Danish army. Early this spring, in Copenhagen, a general examination of the population for tuberculosis, combined with BCG vaccination, was begun. In the course of about half a year, nearly all the persons of 15 to 35 years will be examined, and the tuberculin-negative will be vaccinated.

Because of this wide experience, Holm concludes that BCG vaccination is absolutely safe. When the proper technique of vaccination is employed by experienced vaccinators, the complications after BCG vaccination are relatively few. The vaccination gives considerable, but not absolute, protection. It protects almost completely against the morbid phenomena accompanying the tuberculous primary infection, and it also affords a considerable protection against genuine tuberculosis of the various organs—in particular, against phthisis.

Studies on a Fluoride Dentifrice

Clinical observations made by E. O. Shaver and E. R. Smith (*J. Dent. Res.* June 1946, p. 121) on the use of a fluoride dentifrice containing 0.5 per cent sodium fluoride showed that daily use over a period of a year produced some desensitization of sensitive cervical areas of teeth affected with gingival recession. Observations were made on 200 subjects. In no case was there any irritation of the gingivae, nor was there any pathologic condition which could be traced to the fluoride dentifrice. Lactobacillus counts taken on forty-seven patients showed that ten of thirty-two subjects using the fluoride dentifrice exhibited a significant decrease in the Lactobacillus count after using the dentifrice for one month. Lactobacillus counts in a control group of fifteen patients using a fluorine-free dentifrice showed no significant change. The experiment was conducted under close supervision and surveillance in a controlled group of adult subjects.



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Suppositories for Treating Asthma

S. J. Prigal, A. M. Fuchs and P. M. Schulman (*J. Allergy* 17:172, 1946) used aminophylline in combination with sodium pentobarbital in suppository form and believe that the combination is more effective than the aminophylline alone. They treated 47 ambulatory asthmatic patients with this combination. The adult suppository contained 0.5 Gm. of aminophylline and 0.1 Gm. of pentobarbital sodium; the children's suppositories contained 0.025 Gm. of aminophylline and 0.05 Gm. of pentobarbital sodium. Aminophylline suppositories gave relief to 38 of 47 patients during an attack of asthma. Aminophylline in combination with pentobarbital sodium was more effective, relieving 44 of 47 pateints. When the asthma responded to the suppository it required about half the time with the combination as compared with plain aminophylline. The combination helped 44 of 47 patients in reducing the frequency and severity of attacks. Aminopylline alone was helpful to 25 of 45 patients. The suppositories were given twice daily. No untoward reactions were observed. The suppositories may be helpful to infants and children because of convenience of administration and rapid action. A patient with a severe attack must be given the aminophylline intravenously, but in mild or moderate asthma the suppositories of aminophylline and pentobarbital sodium are effective. Cardiac patients responded well, probably because of the beneficial effects of aminophylline on the coronaries and as a result of its diuretic action.

New Treatment for Scalp Ringworm

In a new approach and by the employment of a new topical application, A. Strickler (*J.A.M.A.* 132:65, 1946) has found it possible to cure 74 or 64 per cent of 115 patients affected by tinea capitis (ringworm of the scalp) Briefly, the principles involved in this method concern the use of iodine, a remedial agent acknowledged as definitely fungistatic and to a degree fungicidal for the ringworm fungus, and the enhancement of this activity through the application of photosynthesis, whereby it is assumed that the iodine molecule became a more active molecule (an activated molecule).

The treatment followed in these cases consisted in clipping the hair and keeping it short. First a 3 per cent solution of acetic acid is rubbed into the scalp with a tooth brush for two minutes, with particular attention to the infected areas. Next an electric bulb of 150 to 200 watt strength is kept sufficiently close to the scalp to impart a distinct sensation of heat for two minutes. Then the iodine and oil combination is rubbed into the scalp with friction for two minutes by means of another tooth brush, and this is followed by the application of heat from the electric bulb for six minutes. These treatments are given twice daily. The scalp is washed every other day.

The composition of the iodine preparation and the reasons for including each ingredient are given. The remedy is a mixture consisting of iodine (fungistatic and to an extent fungicidal) 78 per cent. red blood cells (essential for photosynthesis) 2 per cent, sodium chloride (as isotonic solution and diluent) 1.9 per cent, chlorophyll (2 per cent in isotonic solution of sodium chloride, as a catalyst and photosensitizer) 0.07 per cent, Deceresol (a wetting agent) 10 per cent, magnesium dioxide (a source of oxygen) 8 per cent, and spleen extract (an enzyme capable of transferring peroxide oxygen to oxidizable products) 0.005 per cent. The final product is reddish black and contains approximately 24 per cent iodine and 0.8 per cent inorganic material. The iodine mixture is incorporated in an oily vehicle, cottonseed oil, in the amount of 2 Gm. of the iodine to 30 Gm. of the cottonseed oil. Deceresol, the wetting agent, is made by the American Cyanamid and Chemical Corporation.

Penicillin Inhalation

Observations made by F. W. Morse (*J.A.M.A.* 132:272, 1946) on a series of 25 cases suggest that the use of penicillin spray produced by a hand atomizer is effective against various respiratory infections. The method is easy, inexpensive and quite as generally applicable as sulfonamide therapy, yet it is not dangerous. Other series of cases using atomizers powered by oxygen under pressure have proved that penicillin spray is strikingly effective against pneumonia, some cases of asthma, bronchiectasis and abscess of the lung and that an effective systemic concentration of the drug in the blood is maintained in this manner. No toxic effects have been observed. The most striking effect of aerosal penicillin is the lessening of cough, sputum and toxicity.

Expressing the opinion that the results obtained warrant further large-scale trial, Morse feels that the following conclusions may be deduced from the series of cases studied:

1. Penicillin spray generated by a hand or bulb atomizer is an effective treatment in many respiratory infections, including those of the nasopharynx.

2. The use of penicillin spray generated by an atomizer is a cheap, safe, painless method which is generally applicable to home use by untrained personnel.

3. The use of penicillin spray generated by an atomizer has great possibilities as a preventive medicine.

4. Pencillin spray is far more effective than oral penicillin as used at present. It has been proved elsewhere that its use is more effective by inhalation than by injection against some respiratory infections.

5. The dosage of penicillin spray is not definitely determined, but small doses proved efficient.

Streptomycin in Subacute Bacterial Endocaditis

Occasionally a case of subacute bacterial endocarditis may be encountered in which the organism is a gramnegative rod insensitive to penicillin. Although a cure may be obtained by the combined use of penicillin and sulfonamides, streptomycin should be the drug of first choice when dealing with such organisms. Strains of streptococci which are insensitive to penicillin may be relatively sensitive to the action of streptomycin. This was the conclusion reached by W. S. Priest and C. J. McGee, Jr. (*J.A.M.A.* 132:124, 1946) following the use of streptomycin in three cases of subacute bacterial endocarditis. Streptomycin apparently produced sterilization of the valvar lesions in the first case, resulted in negative blood cultures after penicillin had failed in the second case, and was solely responsible for the cure obtained in the third case. The dose of streptomycin used (500,000 units or 0.5 Gm. per day) is not necessarily that which will be adequate in all cases where the drug is indicated. In the three cases reported, serum streptomycin levels of 3 to 12 units per cc. were obtained.

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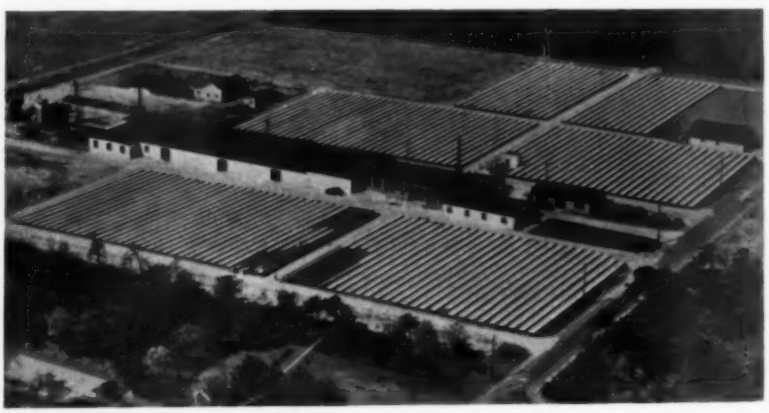

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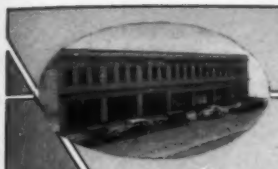

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Ductility Test for Petrolatum

A new test, developed at the research laboratories of L. Sonneborn Sons, Inc., is said to afford users of petrolatum with a means of determining the ductility of this widely-used material. Of interest to drug and cosmetic manufacturers, the new ductility test represents a radical departure from the "hit or miss" methods commonly employed in judging ductility; giving ductility a numerical value and enabling users to select a product suitable for a particular use on the basis of this factor. The ductility test is based on the fact that petrolatum extruded from a vertically hanging tube will eventually break because of its own weight. Test apparatus developed by the Sonneborn research laboratories measures the stub length that remains attached to the extrusion tube after the break. Thus, the longer the stub, the greater the ductility. Reproducible results are obtained by keeping the temperature and rate of extrusion constant. Ductility tests made on various Sonneborn U.S.P. petrolatums disclose that products of medium consistency possess a ductility of 20-25, petrolatums of soft consistency have 14-19, while petrolatum of medium consistency with high melting point show a ductility of 19-22.

Further details on the new Ductility Test may be obtained by writing to the White Oil and Petrolatum Division, L. Sonneborn Sons, Inc., New York 16.

New Sources for Pectin and Lactic Acid

New raw materials for the production of pectin, lactic acid and acetic acid were announced at the recent Chicago meeting of the American Chemical Society. According to A. Van Hook and E. Roboz of the University of Wyoming, pectin, which is extensively used as an emulsifying and thickening agent in drug and cosmetic manufacture, can be obtained abundantly and cheaply from sugar-beet pulp. At present the chief use of beet pulp is as a stock feed; pectin being obtained from other pulps such as apple pomace and cull citrus fruits.

By a new fermentation process described by R. H. Leonard and W. H. Peterson of the University of Wisconsin, lactic acid can be produced cheaply from sulfite liquor, a waste product of pulp mills. The crude liquor is first steam-treated to drive out sulfur dioxide, slightly alkalinized with lime and filtered to remove the sulfite precipitate. It is then inoculated with the fermenting organism, a special strain of lactobacillus. Fermentation for from 40 to 48 hours provides a yield of slightly less than 2 per cent of lactic acid. The acid is separated from the aqueous solution with an organic solvent, such as amyl alcohol.

Acetic acid is also formed during the fermentation and can be separated from the lactic acid by distillation. It is estimated that each ton of pulp would yield about 285 pounds of lactic acid and 75 pounds of acetic acid.

Cream Shampoos

During the past two years, says W. J. Beach (Soap & Sanit. Chem. *22:46, Aug. 1946) shampoos of the creamy type have shown great popularity. Although better grades of shaving creams have long been used successfully as shampoos, the newer products have a definite appeal of their own. Cream shampoos have the same creamy or pleasing appearance that is associated with the finer cosmetic creams and lotions. The creame, or "creme" type shampoos are essentially emulsions, and their white or creamy opacity is due largely to an intimate dispersion of water and oil, rather than to added pigments. Most of the thicker creams or pastes are dispersions of a small amount of water in an oil base of soaps, emulsifying and wetting agents, and other detergent and conditioning aids. In the milky types, it is the organics that are dispersed in a larger amount of water. The products are usually left in their original cream-like color although some of the milky preparations are tinted. Perfume is used very sparingly; the floral type seems to prevail.*

In composition, cream shampoos are formulations of soaps or soapless detergents and synthetic surface-active organics, together with superfatting and hair conditioning agents, all intimately mixed and emulsified with water with or without the use of additional emulsifying agents. The types are creamy or milky depending on the quantity of added water. Some of the creams are thick pastes and others are thin creams depending on the nature of the ingredients.

The soaps used in cream shampoos are made from various mixtures of lauric, palmitic, and stearic fatty acids, partially or completely saponified by soda, potash, or amine compounds depending on the consistency desired. The fatty acids are compounded with the saponifiers usually with a minimum of heating except where stearic acid is an ingredient. Carbonates, bicarbonates, and other sodium and potassium compounds of low alkalinity are used as saponifiers, as are higher molecular weight amines. The amine soaps of stearic acid are stable and white, but gradually turn tan over a number of months. They are excellent emulsifiers and act to lower the alkalinity of any soda or potash soaps that might be in the formula.

Mono- and triethanolamines are the most commonly used amines, the triethanolamine being sometimes replaced in part with isopropanolamine to produce greater color stability. Only free fatty acids can be saponified by these amines, as they do not react well under normal conditions with the unhydrolyzed glyceride types of fats. When saponifying completely to form a neutral soap, it is best to balance the amine requirement so as not to have an excess. This is conveniently accomplished by determining the total alkalinity of the amine and acidity of the fatty acid mix just before compounding.

The incorporation of synthetic, organic, surface-active compounds improves detergency, lathering, and rinseability in hard water. They also aid in the compounding of the various constituents,—giving smooth, pearly creams the consistency of which can be controlled by the amount and types of synthetics blended into the formulae. Surface active agents of the anionic type, such as sulfonated and sulfated higher alcohols, are found in numerous cream shampoos, although some manufacturers have found that the nonionic type serve to enhance stability especially in the products of higher real soap content. Cream shampoos on the "acid side" may be emulsified by emulsifiers presenting an active cation rather than an anion as do most soaps, for these compounds are not precipitated as readily by acids or by the calcium of hard water.

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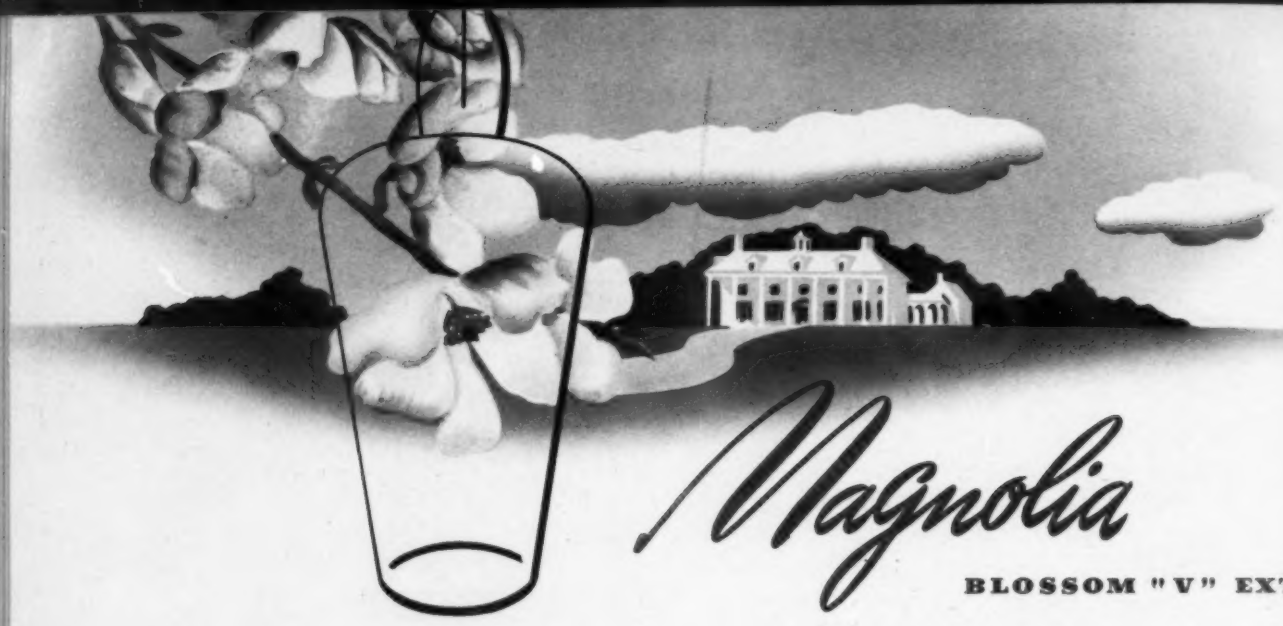

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A number of other adjuncts are included for special purposes in the formulation of cream shampoos. Lanolin is used up to about five per cent as a superfatting agent. About one per cent of terpineol added to the lanolin prior to compounding will mask any slightly rancid odor that may develop on long-standing. Lanolin may cause some discoloration. Some creams are color-stabilized by the use of about one oz. of sodium bisulfite per 100 lbs. of cream, but care should be taken to insure that off-odors do not occur after a time. Spermaceti and cetyl alcohol will increase the body of the cream and are used by some makers to replace stearic acid. The addition of borax or trisodium phosphate to the milky type shampoos up to a maximum of one per cent is said to improve color stability.

Beach points out that there are still a number of problems which seem not to have been solved by all manufacturers of cream shampoos. The milky types are hard to keep in suspension at temperatures up to 100° F. and they tend to become translucent. The soap content must not be so high as to cause a gel on cooling. Many manufacturers have experienced difficulty with stability and uniformity of these milky types of lower viscosity. In some cases, these troubles have been largely overcome by reducing the partical size of the emulsion or increasing interacial areas by homogenization, or by the use of the colloid mill. The efficiency of some of the paste types high in soap content is questioned. Those that are formulated from higher melting-point fats have less detergency and rinseability, and must be complemented with synthetics. The synthetics offering unstable, flash foams are to be avoided. Care must be taken to formulate an "all year" product that will be chill-proof and not too thick in the winter, and still not be too thin and tend to separate if kept in a warm place.

Booklet on Metallic Soaps

Concise, yet comprehensive data on metallic soaps is offered in a new booklet issued by the Mallinckrodt Chemical Works. The discussion of the properties and uses of metallic stearates contained in this publication is both practical and thorough. Covering a broad range of subject matter, the booklet includes much information of interest to cosmetic and pharmaceutical manufacturers who use such metallic soaps as zinc stearate and magnesium stearate. The usefulness of the publication is well augmented by an application index, a properties index and a compounds index. Copies of the booklet, "Mallinckrodt Metallic Soaps" are available on request from Mallinckrodt Chemical Works, North Second and Mallinckrodt Streets, St. Louis 7, Missouri.

New Edition of Emulsions

A new edition of its book on EMULSIONS is now being offered by Carbide and Carbon Chemicals Corporation, a Unit of Union Carbide and Carbon Corporation. The 72-page book presents over 113 practical formulas and methods for preparing cosmetic and industrial emulsions of oils, waxes, fats, and greases. Extensive additions and revisions have been made to the material given in previous editions, including description of the uses of "Tergitol" wetting agents, "Carbowax" polyethylene glycol emollients, and "Cellosize" hydroxyethyl cellulose thickener in new emulsion formulas. The book also describes the use of many of the recently developed amine soaps and cationic dispersants which have become commercially popular as emulsifying agents. Copies may be obtained without charge from any district sales office of Carbide and Carbon Chemicals Corporation, or from its principal office at 30 East 42nd Street, New York 17, New York.

Latest Consultant's Directory Available

The 1946 (10th) edition of the "Classified Directory" is now available from the Association of Consulting Chemists and Chemical Engineers, 50 East 41st Street, New York 17, N. Y. The Directory is available without charge to applicants giving full name, business connection and address.

Alginic Acid-Acetate

The acetylation of alginic acid (from seaweed) by means of a kelone has been described by Wasserman (Nature 158;-271, 1946). The reaction takes place in the cold with little or no degradation of the alginic acid molecule. Sodium alginic-acetate is not completely soluble in water, as is sodium alginate, but swells to a limited extent. By adding an equivalent quantity of sodium hydroxide solution to the dried ester-acid at room temperature an opaque gel is formed. When the addition is made at 60° C., however, a colorless, transparent gel is obtained to which further water may be added to produce more swelling. These gels possess cation exchange properties and therefore take up colors readily, as well as removing cations, e.g., calcium, magnesium, from solution. Provided, therefore, distilled water is used throughout, experiments using alginic acid-acetate gels in hand jellies should prove interesting. Their color absorption properties and their cool feeling should be utilizable to produce pleasing products.

Setting Lotion for Children's Hair

Two simple formulas for preparing setting lotions suitable for use on children's hair are given in the *Chemist and Druggist* (146:409, 1946), as follows:

I

Acacia, powdered	**0.3**
Borax, purified	**2.0**
Isopropyl alcohol	**10.0**
Distilled or rose water, to make	**100.0**

Dissolve the acacia and the borax in about 80 parts of warm water, add the isopropyl alcohol, which may be perfumed with terpineol or other compound, and dilute to the requisite bulk.

II

Tragacanth powdered	**2 dr.**
Glycerine	**5 dr.**
Alcohol	**4 dr.**
Water	**30 oz.**
Terpeneless oil (for perfuming)	**10 min.**
Color	**as required**
Solution of formaldehyde	**35 min.**

Rub the tragacanth with the alcohol and perfume and slowly add the glycerine. When homogeneous, slowly add 10 ounces of fairly hot water, and if the solution is lumpy, pass two or three times through muslin. Then add the remaining 20 ounces of water (cold). After three days this preparation becomes transluscent.

Lanolin Hair Dressing

According to a note in the N.A.R.D. Journal (68:1898, 1946), a lanolin hair dressing can be formulated along the following lines:

Stearic Acid	**6.0**
Liquid Petrolatum	**32.0**
Lanolin	**2.0**
Triethanolamine	**2.0**
Water, to make	**100.0**

Heat the stearic acid, liquid petrolatum, and lanolin to 60° C. Heat the triethanolamine and water to the same temperature. Mix and stir. Perfume as desired. The consistency may be regulated by varying the amount of stearic acid. It is recommended that shelf tests for stability be made before the product is marketed.

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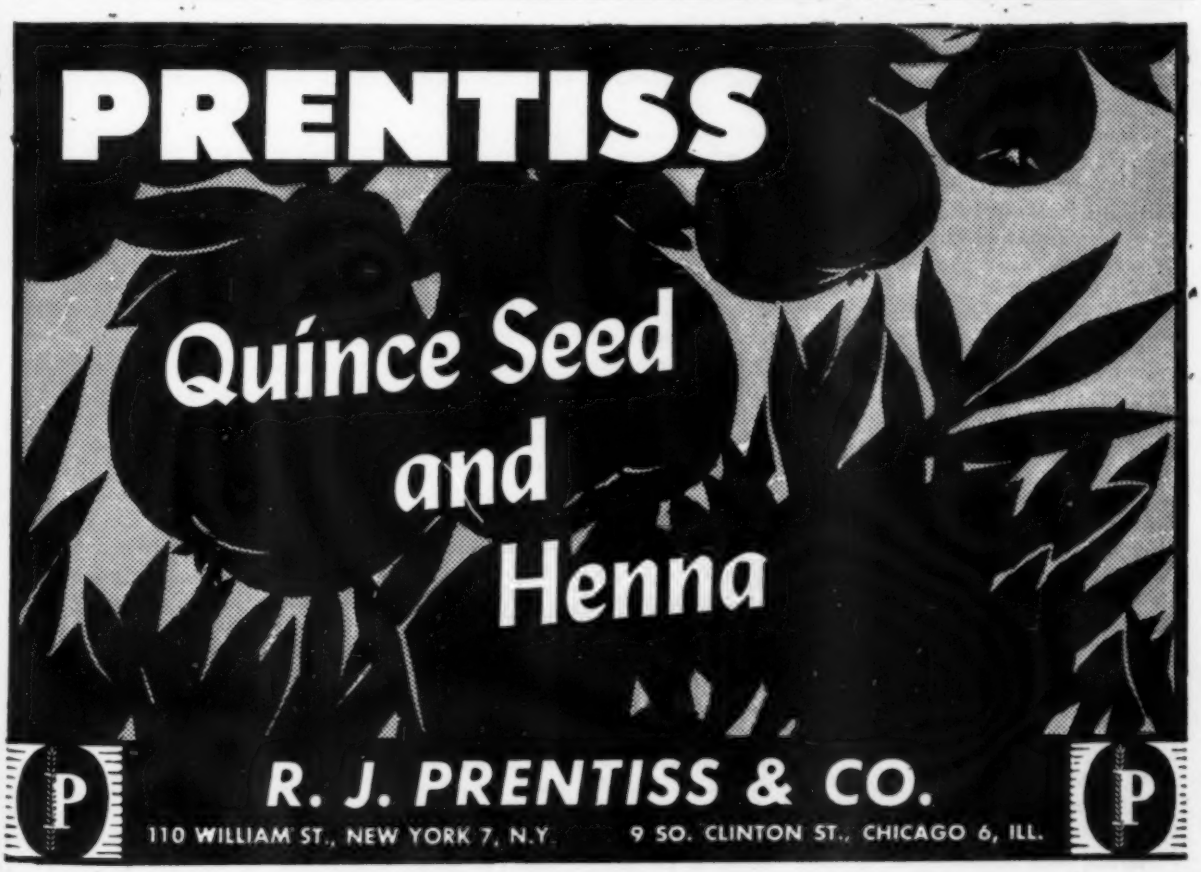

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Perfumer's Shelf

Aldehydes in Perfumery

A very comprehensive review of the aldehydes and their place in perfumery has been presented by R. W. Moncrieff in the August and September, 1946 issues of *Soap, Perfumery and Cosmetics*. Aldehydes, it is pointed out, are characterized by the presence of a doubly bound oxygen atom on the same carbon atom. The lighter load of the hydrogen atom tends to make the carbonyl group more reactive and in general the aldehydes undergo reactions more readily and briskly than the relatively sluggish ketones. They may also be considered as intermediate between alcohols and acids. The doubly bound oxygen imparts to them greater reactivity, while at the same time they are considerably less stable than the acids.

The aldehydes are reactive, unstable, and volatile, and, as would be expected, these properties confer an interesting range of odors. There are, however, two corollary points that must be noted. First, the volatility of aldehydes may be excessive, so that they lack persistence in perfumes, and it often important to use a suitable fixative to confer some degree of retention of odor. Second, their intense reactivity and in many cases their instability means that an exposure to the atmosphere they are inclined to oxidize and many aldehydes are unsuitable for use in perfumery.

In spite of their instability, the aldehydes represent a very important class of perfume constituents. Very often a trace of an aldehyde will lift a perfume out of the rut and lend it a distinction it often otherwise lacks. The aldehydes as a class are powerful odorants and have to be used with nice discretion; it is very easy to use too much of an aldehyde and completely ruin a bouquet. The extreme smallness of quantities of some aldehydes which could evoke olfaction has long excited wonder. Back in 1892, Passy determined the minimum perceptible quantity in millionths of a gram per liter of air for some of the aldehydes. He found citral just perceptible in 0.5 to 0.1 x 10^{-6} grams per liter and vanillin just perceptible in 0.005 to 0.0005 x 10^{-6} grams per liter.

Starting with formaldehyde, as the lowest member of the group, and progressing through the higher fatty aldehydes, Moncrieff discusses the chemistry structure, production and odor characteristics of the various aldehydes used directly or indirectly in perfumery. Twelve methods of synthesis of aldehydes are considered briefly. These include synthesis (1) from natural sources, (2) by the oxidation of a primary alcohol, (3) by dehydrogenation of primary alcohols, (4) by dry distillation of the calcium salt of the acid with calcium formate, (5) by hydrolysis of dichlor compounds, (6) by distillation of alpha-hydroxy acids, (7) by condensation of two aldehydes, (8) by condensation of toluene with an aldehyde, (9) by aluminum chloride reaction, (10) from acetylene derivatives, (11) from ketones, and (12) by Griegnard reactions.

Moncrieff remarks that most natural perfumes contain aldehydes and that practically all synthetic perfumes also contain them. Benzaldehyde will be found in synthetic heliotrope, decyl aldehyde in synthetic neroli, and nonyl aldehyde in synthetic rose. The C_8 and C_{10} aldehydes are used in chypre to the extent of about 0.01 per cent. The terpene aldehydes such as citral and hydroxy citronellal and the aromatic aldehydes such as cinnamaldehyde, not being so powerful as the higher fatty aldehydes, can be used in larger proportions. Most aldehydes are subject to atmospheric oxidation and there is a tendency in the fatty aldehydes to undergo aldol condensation or to form polymers in some other way. The higher fatty alcohols in particular are liable to contain impurities which mar their odor. All these difficulties make care necessary in the use of aldehydes in perfumes.

Nonetheless, the potentialities of aldehydes in perfumery are immense. This is well illustrated in the case of furfural which has been investigated by Faber. Furfural is obtainable from bran, can be made cheaply and could be made in almost unlimited quantities if desired. It has been found capable of giving condensation products with other aldehydes and ketones to form products useful in perfumery. Esters of furoic acid and furfuryl alcohol are also useful as are esters of furacrylic acid. Such derivatives could be used in white clover, orange flower, chypre and wild lavender perfumes.

In considering estimation of aldehydes, Moncrieff notes that in such oils as lemongrass, cassia, cinnamon and lemon, the aldehyde content really determines their value. It is usually determined by forming either the sodium bisulfite compound or else the oxine. Tests that are commonly used to detect the presence of aldehydes are: (1) resinification with alkalis, (2) reduction of an ammoniacal silver solution to give a silver mirror and (3) the use of Schiff's reagent.

Essential Oils from Northeast U.S.

In a symposium on "Extractives from Northeastern Woods," presented to the Northeastern Wood Utilization Council (Bull. No. 9, Aug. 1946), A. W. Downey points out that essential oils are very important items of commerce. One or more is used in practically every industry, either because of the fact that they have an odor or because they have a taste. There are various commercial methods of producing essential oils, such as: steam distillation, expression, and extraction with volatile solvents. However, the most common and useful method is that known as steam distillation. Practically all essential oils are distilled at the source of growth. Sometimes they are redistilled upon arrival from their original source. Stills of wooden construction are still generally used in the country, although field stills made of steel and having efficient condensers are gradually replacing them.

The most important essential oils which can be obtained from the Northeast area in commercial quantities are as follows: Oil Juniper Berries, Oil Juniper from the twigs and leaves, Oil Sweet Birch, Oil Wintergreen, Oil Sassafras, Oil Cedarwood, Oil Cedarleaf, Oil Hemlock, Oil Spruce, Oil Balsam Fir (Abies Balsamea), Oil Balsam Fir Canada.

A brief description of the sources and uses of these oils, as well as other prewar and present price quotations, is included in the discussion. In concluding, Downey observes that it would be worth while to note the following facts which can be of assistance to producers in the United States:

1. The Juniper Berry Oil industry would have to be more developed before it can compete with the European products.

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2. There is a possibility that more Oil Birch and Oil Wintergreen can be produced in areas which are not producing at the present time.

3. The possibilities in the production of Oil Sassafras, if there is enough of it in the Northeast area, should be investigated. This would be quite a decided factor in the Essential Oil industry, because at the present time there are only a few producers.

4. The Balsam Fir Canada Industry in the Northeast should be developed to a greater extent.

5. New uses should be developed for the use of Oil Cedarleaf, to take care of the slack when and if it is deleted by the U. S. P.

6. Possibilities in the production of Oil Cedarwood should be thoroughly investigated.

7. Greater utilization of branches and other discarded parts of trees left lying around in the woods should be investigated for essential oil content and production. This would tend to cut down the tremendous fire hazards which exist in every forest.

Investigations on Kakra-Sringi

As part of their chemical investigations of Kakra-Sringa, the galls from *pistacia integerrima*, Karimulla, V. Subba Rao and U. Shankar (*J. Sci. & Ind. Research* (India) 3:423, 1945) obtained by ether extraction a green viscous mass from which was derived crystalline compounds melting at 179 to 180° and 163° C. These contained hydroxyl groups but no nitrogen. Steam distillation of Kakra-Sringa yielded 1.3 per cent of a colorless oil having the following properties:

Specific gravity at 13° C.	**0.8759**
Index of refraction	**1.4735**
Specific rotation	**–19.5°**

Distillation of this oil produced a fraction (about 50 per cent) between 155° and 165° C. which contained alphapinene. Oils one year old were yellow, and had characteristics quite different from the fresh oil.

Perfumes in Medicine—Old and New

A discussion of the role of perfumes in medicine, published in the *Australasian Journal of Pharmacy* (27:93, 1946) indicates that old customs were not entirely irrational, even from the modern viewpoint. Thus, in times when no real antiseptics were available, doctors advised continually smelling of perfumes or aromatic herbs in times of epidemics, and in places where sick people were gathering. Herbs were strewn on the floors of private sickrooms—a mixture of hyssop, lavender, basil, tansy, balm, the mints. They were stirred and beaten so that a wholesome fragrance drifted out into the air. (Today, there is widespread interest in the use of germicidal mists or vapors).

Centuries ago, Pliny recommended, hanging pennyroyal in bedrooms because he considered it valuable for the health of inmates. During the period of the Black Death, the plague, in Europe, odoriferous candles were used in the sickrooms. They contained red roses, cloves, storax, labdanum, frankincense, citron peels, juniper berries, musk, ambergris, etc.; the mixture was formed into candles with gumdragant, which had been dissolved in rose water. In modern practice, the use of perfumed sprays is considered to be an excellent method of improving the air within a sickroom where one or several patients are suffering from chronic conditions of the bladder or the bowels, or from bedsores, or from a badly-smelling skin disease. No airing nor ventilation may be sufficient to remove all bad odors from the room, and consequently perfumes are a valuable help and relief, welcome to both the patient and the nurse.

A spirituous preparation containing oil of rosemary and other essential oils, eau-de-cologne, may prove useful in nursing. It is added to the water used for washing or sponging the face, the hands and other parts of the bedridden patient. Patients like its cooling and refreshing effect. A diluted solution of the perfume preparation makes an evaporating solution out of which one or two layers of gauze are wrung and applied to the forehead, or inflamed joint, or bruised part, whenever the sensation of cooling is required.

The feeling of relaxation and the nerve-soothing effects provided by pine-scented baths has long been recognized. Formerly the fresh boughs of pines and firs were used for a warm bath; later oils were extracted, and now, in addition, there are many artificially produced chemical compounds that are suitable for making both oils and bath salts. Perfumes were used to combat irritation in the nose, throat and larynx in colds. The use of lavender in inhalants is an example of modern usage. Also cited is the continued use of perfumes in preparations for the care of the month and breath. In the first century A. D., Nero often invited his friends to lavish meals, but he insisted that they use perfumed mouth washes before coming to the table. Most modern dentifrices and mouth-washes include one or several perfumes. They are no lasting help for strongly offensive bad breath; in such cases the only thing to do is to find out the physical cause and to start proper treatment.

Essential Oil of the Mango Flower

In *Science and Culture* (11:700, 1946) P. L. Narashimha, of the Indian Institute of Science, reports the results of studies of the essential oil of the Mango flower. The oil, prepared from the flower by steam distillation, is greenish yellow, mobile, and retains the characteristic aroma of the fresh flower. Yields are from 0.03 to 0.05 per cent. The following physical properties have been determined:

Specific gravity	**0.819**
Index of refraction	**1.4816**
Specific rotation	**0.8°**
Acid value	**4.1**
Saponification value	**24.9**
Saponification value after acetylation	**122.5**
Carbonyl value	**11.0**
Phenols	**none**

The results of fractional distillation are shown in the following table:

Fract. No.	*Boiling Point*	*Specific gravity*	*Index of refraction*	*Specific rotation*
1	72-76° C. 53mm.)	0.8468	1.4702	4.6
2	76-80° C. (53 mm.)	0.8484	1.4702	7.5
3	65-130° C. (6 mm.)	0.9022	1.4737	
4	130-160° C. (6 mm.)	0.9212	1.4948	
5	up to 180° C. (6 mm.)	0.9439	1.4952	

The hydrocarbon fraction appeared to contain traces of alpha-pinene, limonene, and dipentine. The alcohol fraction consists mostly of nerol.

Determining Volatile Oil Content of Botanicals and Spices

Incidental to a discussion of the botany and processing of nutmeg, K. H. Landes (*Spice Mill* 69: No. 5, 59, 1945) has described a new way to determine the volatile oil constituent of spices or botanicals. In his method, the dried, ground material, mixed with anhydrous sodium sulfate, is extracted with anhydrous ether in a Sohxlet extractor. The ether extract is evaporated at 47° C. to yield the total extract. Heating at 110° C. drives off the matter volatile by steam. The volatile essential oil is the sum of that lost at 110° and that lost during steaming. The nonvolatile portion is the residue in the dish.

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Patent Thoughts and Trends

By THOMAS CIFELLI, Jr., Patent Attorney

ANALYSTS AND NEW IDEAS

Viewed from one angle, U. S. Patent 2,409,001 may well prove to be one of the most important patents issued in a long time. This patent deals with new urethane esters which are said to be of value for infiltration and spinal anesthesia. The new esters are prepared by reacting beta-dimethylaminoethanol or -isopropanol with certain aryl isocyanates, such as the phenyl variety.

Now, noting that the inventors are Shelton and Van Campen and that the patent has been assigned to the well-regarded Merrell Company of Cincinnati, one may start out by being reasonably certain that the statements made in the patent are correct, and that compounds of real value have been disclosed to the world.

However, what makes this particular patent of special interest to at least one person is not so much what is stated in the patent but rather the lesson that can be learned from the patent quite apart from its specific teachings.

What is this lesson?

Simply stated, the lesson is that the analyst or so-called "tester" need not be the "step-child" of the technical team, as is presently the case in too many instances. Or, putting the matter in positive terms, testing departments of research organizations *are* fitted to make substantial contributions to such organizations in the form of new and practicable ideas.

One may well ask: what possible connection exists between a new spinal anesthetic and the conclusion just drawn? Let us see.

The analyst, no less than his brothers in research, has access to current trade and scientific journals. As a result, he can keep abreast of the technical problems of the day, and their solution, in his and own related fields. Moreover, because of his contacts with the other departments in the company, the analyst is in an unique position to keep his "fingers" on much of the work going on in his organization. All roads in an industrial plant lead to the analytical department.

If this were all, it would not be enough. For anyone knows that a fair opportunity to solve a problem requires that time to experiment should be provided. Here it is that the analyst is in an advantageous position. *He is experimenting much of the time, but apparently neither he nor his employer realizes it.*

Take the case of research chemist A, who has synthesized a new alcohol and submitted it to the analyst for determination of constants. How often does the analyst, entirely on his own, prepare a few derivatives for purposes of characterizing the substance submitted and then mechanically record his data? How many analysts realize that derivatives of the substance submitted may themselves possess superior or unexpected properties and hence may be patentable? Maybe one of the derivatives, if not suitable for a problem research chemist A is working on may be suitable to solve one of research chemist B's problems.

Nor should the analyst fail to consider utility of his derivatives merely because they may not be new compounds. The lessons of sulfanilamide and DDT, both really old compounds when their outstanding uses were found, ought to be kept in mind here.

Turning to U. S. Patent 2,409,001, one can see that it involves a classical reaction used to characterize alcohols, viz: the formation of urethanes by reacting an alcohol with phenyl isocyanate. This is precisely the kind of reaction many analysts conduct as a matter of course. It is the kind of invention, therefore, that an analyst might well make.

Though no studies may have been on the point, it is quite probable that if one were made to determine the contributions made by analysts to new products of a company, the results would not be favorable to the analysts. In view of the foregoing discussion, it appears that something can be done about this. A somewhat different, more creative, approach by the analyst to his work would help. This would have to be accompanied by a different attitude towards the analyst on the part of management. Perhaps, it might even pay in dollars and cents to put the best brains in the analytical department.

Of course, it is recognized that scientific research must be "organized" properly and that one cannot have analysts doing the work of research or production men, and vice-versa. At the same time, no one can seriously contend that it serves the purposes of progress—or the interests of the stockholders—to fail to utilize to the fullest the capabilities of such a numerically-important segment of the technical population.

Recent Leading Patents

Sex Hormone Intermediates

No less than nine patents (U. S. 2,408,827-35) were recently obtained by Wagner (assigned to Parke, Davis). These deal with new steroidal sapogenin and p s e u d o-sapogenin compounds. These substances are said to be particularly desirable as adrenal cortex hromones, since they have an oxygen at position 12 of the steroid nucleus. Various species of the Yucca plant are utilized. Earlier patents of Wagner in this field include U. S. 2,352,848 and 2,352,852.

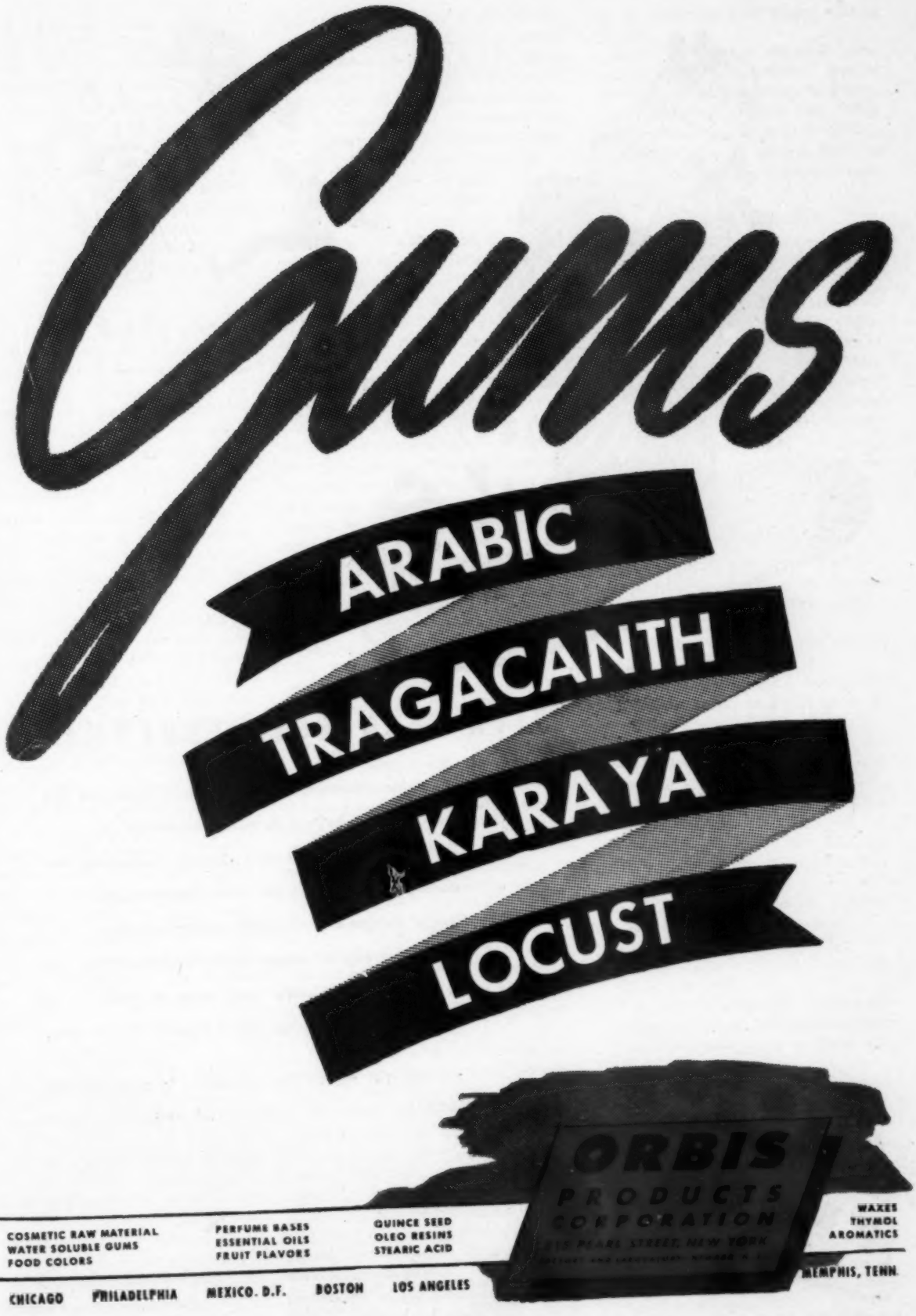
Marker also obtained and assigned to Parke, Davis a patent (U. S. 2,409,293) in this field, the patent covering merely a step in the process of making the hormone intermediates.

Hair Waving Treatment

Speakman, an English inventor, was granted U. S. 2,410,248, on a method for applying a permanent set to hair. He previously had obtained U. S. 2,201,929 and U. S. 2,351,718.

According to the latest patent, keratin-containing fibers are customarily subjected to steaming or hot water treatment in the presence of compounds which may include reducing agents at or only slightly below the boiling point for the release of strain and the application of a permanent set.

It has been proposed to treat wool or hair with a boiling bisulphite solution while tensioning the wool or hair. Such treatment at the boiling point will re-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sult in disruption of the disulphide bonds of keratin and the immediate formation of S—NH bonds as indicated by the following equations:

(1) $R—S—S—R + NaHSO_3 = R—SNa + R—S—SO_3H$

(2) $R—S—SO_3H + R'—NH_2 = R—S—SO_3NH_3—R' \rightarrow R—S—NH—R'$

where R—S—S—R and R′—NH_2 represent the peptide and associated side chains of keratin. The reactions take place with great readiness that a sufficient number of linkages to impart a permanent set to the fibers is formed in so short a time that the process is commercially useful. Bisulphite solutions, however, have the disadvantage that at the boiling point of water they are capable of serious destructive attack on hair and at lower temperatures the rate of formation of linkages as represented by Equation 2 above, is negligibly small and therefore proceeds far too slowly to be commercially useful.

The object of the present invention is to provide a treatment whereby release of strain and permanent set are obtained at temperatures appreciably below the boiling point of water.

The invention is based on the observation that salt linkages between the peptide chains of keratin-containing fibers are most stable at pH 6 and thus relaxation in strained fibers is delayed and disulphide bonds remain in a state of strain for a longer time, in which state the bonds are more readily reduced.

The invention consists in treating fibrous substance containing keratin, such as wool or hair, while maintained in a formation which it is desired to render permanent, with an acid sulphite solution at or about pH 6 at a temperature of from 50°-70° C. whereby the disulphide or cystine bond of keratin is disrupted and further linkages represented by R—SNH—R are formed simultaneously in or between the fiber molecules.

Indole

DuPont, according to U. S. 2,409,676, claims to have an improved process for making indole, that evil-smelling yet sought-after component of perfumes. The process involves passing o-ethylaniline over suitable dehydrogenation catalysts and yields of 65-80% are claimed. The catalysts include a number of the elements (or their oxides) of groups III to VIII of the periodic system, titania gel being preferred, however. Temperatures between about 550° to 750°C. (preferably 625° to 675° C.) and a space velocity of 50 to 1000 are employed. By space velocity is meant the number of cc. of gas, N.T.P., which passes over 1 cc. of catalyst per hour.

Example 1, as given in the patent, follows: "o-Ethylaniline (72 grams) was passed over a titania gel catalyst contained in a Vicor tube heated to a temperature of 698° to 705° C. (space velocity, 290). The effluent gas was coded by means of a condenser, and the condensate was distilled at diminished pressure yielding 47.7 grams of recovered o-ethylaniline (B. P., 67°/4 mm.)., and 14 grams of a distillation residue which was crude indole. Indole was separated from this residue by steam distillation.

Denture Cleaning Compositions

Snell et al, in U. S. 2,409,718, point out the severe requirements for compositions for cleaning artificial dentures as compared with those for cleaning natural teeth and contend that compositions for the two purposes are not satisfactorily interchangeable. For one thing, deposits on artificial dentures are more firmly placed thereon due to the dryness of such dentures. The color of the plate, unlike that of the natural gums, cannot be restored if bleached. Also, the porcelain, plastic, rubber, etc. of which the dentures are made are obviously quite different from the calcium phosphate of the teeth and live tissues of the gums.

In view of these differences, a patent was granted on a composition containing a known germicide, the sodium salt of 2,2′-dihydroxy-3, 5, 6-3′, 5′-6′hexachloro diphenyl methane. The patentees assert that no known alternative for this germicide is known in their formula.

Color Stabilizers

Cosmetic creams, flavors, perfumes, and medicines are among a number of products which are said to have their color stability improved by the invention of U. S. 2,408,904.

It seems that natural gum guaiac contains certain quantities of phenolic material and when these encounter traces of iron, copper or the like in a fat or oil, the same fat solution assumes a pink or purple color which varies in intensity with the quantity of gum or metal present. Presence of traces of iron and nickel is particularly common since fats, oils, and other materials protected from oxidation by gum guaiac are, for the most part, processed commercially in equipment made of one or both of these metals. Copper is picked up by edible fats from copper cooking utensils.

Black, the inventor, claims the prevention of these colorations can be effected by traces of acid reacting materials stronger than acetic acid. They may be added in small amounts (0.001% to 1.0%) in aqueous solution, near the end of the usual deodorization treatment.

Synthetic Glycerides

In the formation of esters of unsaturated acids and polyhydroxy compounds such as glycerol, oxidation and polymerization side reactions are known to plague the fellow interested in yields, etc. U. S. 2,408,905 proposes a way of avoiding such side reactions, by first forming a halogen addition compound with the unsaturated acid, converting this to the acid chloride, esterfying, and then removing the halogen. The patent neither discloses nor claims a process involving conversion to acid halides other than the acid chloride.

Other Recent Patents

U. S. 2,408,893-(Swan and White)—**Choline-like compounds having mydriatic and cycloplegic properties.**

U. S. 2,408,908-(General Mills)—**Vitamin D process.**

U. S. 2,409,241-(Squibb)—**Method of producing substantially pure d-tubocurarine chloride.**

U. S. 2,409,287-(E. Lilly)—**New intermediates for antimalarials, such as 5-diethylaminopentene-1, are made by a process involving the Grignard reagent.**

U. S. 2,409,291-(Squibb)—**Chemotherapeutic sulfanilamide derivatives.**

U. S. 2,409,345-(American Cyanamid)—**Nicotinic Acid process.**

U. S. 2,409,455-(Merck)—**Tetraacetyl ribonic acid. See also U. S. 2,261,608.**

U. S. 2,409,663-(Squibb)—**Amino alcohol esters of alkyl-substituted alkoxybenzoic acids as local anesthetics.**

U. S. 2,409,754-56-(Parke, Davis)—**Method for obtaining hydantoins.**

U. S. 2,409,798-(T. Reichstein)—**Compounds of the cyclopentano polyhydrophenanthrene series.**

U. S. 2,409,806-(Pittsburgh Coke)—**Nicotinic Acid.**

U. S. 2,410,040-(U. of Mich.)—**Basic alkyl esters and salts (beta-diethylamino-ethylalpha-(paraxenyl)-propionate hydrochloride). Antispasmodics.**

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Industry's Books

Cosmetics and Dermatitis, by Louis Schwartz, M.D., Medical Director, U. S. Public Health Service; and Samuel M. Peck, M.D., Medical Director (R) U. S. Public Health Service, 189 pp., Illus., Paul B. Hoeber, New York, $4.

In this work all types of cosmetics are examined critically from a dermatological viewpoint. The history and known effects of the most often used types of beauty and cleansing preparations are systematically investigated, with conclusions based on the authors' own wide experience and a review of the published literature. Sample formulas of most classes of cosmetics are given: astringents, hand lotions, hair dyes and depilatories, lipsticks, nail polish, suntan preparations, perfumes, etc. These formulas will be of help to the physician in tracking down an allergy or alleviating a known dermatitis. Special practical chapters are devoted to diagnosis and treatment of dermatitis, to patch testing, and beneficial aspects of cosmetics.

Qualitative Organic Microanalysis, by Frank Schneider, Ph.D., John Wiley & Sons, Inc., New York, 218 pages, $3.50.

This book is intended for use as textbook of qualitative organic analysis and the methods of classification used differ little from those to be found in other texts; a major difference exists, however, in the techniques. Instead of the samples usually required, the author advocates and describes in great detail manipulations with quantities often less than a single milligram. The disadvantages of such procedure are embodied in the refined technique required; the advantages are obvious, and most impressive. A complete identification procedure can be carried out with a sample almost too small to be seen with the naked eye; very little space and small amounts of reagents are needed; far less time is required for the complete operation.

The great virtue of this text, in the mind of the reviewer, lies in the very complete description of microchemical equipment, techniques and operations, fully half of the book being devoted to detailed descriptions of apparatus, very often extremely simple, for each necessary operation. Practise in the described operations should well repay the effort involved.

An Introduction to Botany, by Arthur W. Haupt, Associate Professor of Botany, University of California, Second Ed., 425 pp., Illus., McGraw-Hill, New York, $3.50.

The new second edition of this work covers the fundamental facts and principles relating to the structure, functions, life relations, and evolution of plants. Emphasis is placed upon morphology and considerable attention is given to the principal physiological processes. The book has been revised in the light of present-day knowledge, a number of chapters have been entirely rewritten, and significant new material has been added. A feature of the second edition is the list of visual aids—motion pictures and film strips—correlated with the material in the text.

Official and Tentative Methods of Analysis of the Association of Official Agricultural Chemists, Sixth Ed., 1945, 932 pp., published by the Association of Official Agricultural Chemists, Washington, $6.25.

In this Sixth Edition the methods of the Association are presented with the changes adopted during the five-year period since the fifth edition of 1940 up to and including the 59th Annual Meeting, October, 1944. In this book are found scores of procedures for the analysis and examination of the products of, or essential to agriculture, as well as other methods applicable to commodities only remotely, if at all, related to this fundamental industry of mankind. The table of contents reflects the scope of the present work: Soils, Fertilizers, Agricultural Liming Materials, Cosmetics, Enzymes, Insecticides and Fungicides, Caustic Poisons, Naval Stores, Gelatin, Dessert Preparations, and Mixes, Leathers, Tanning Materials Plants, Beverages (non-alcoholic) and and Extracts—and Brewing Materials, concentrates, Malt Beverages—Sirups Wines, Distilled Liquors, Baking Powders and Baking Chemicals, Coffee and Tea, Cacao Bean and its Products, Cereal Foods, Coloring Matters, Dairy Products, Eggs and Egg Products, Fish and Other Marine Products, Flavoring Extracts, Fruits and Fruit Products, Grain and Stock Feeds, Meat and Meat Products, Metals—Other Elements and Residues in Foods, Nuts and Nut Products, Oils—Fats and Waxes, Preservatives and Artificial Sweeteners, Spices and Other Condiments, Sugars and Sugar Products, Processed Vegetable Products, Vitamins, Waters—Brine—and Salt, Radioactivity, Drugs, Microbiological Methods, Microchemical Methods, Extraneous Materials in Foods and Drugs, Standard Solutions, Reference Tables.

Modern Management in Clinical Medicine, by F. Kenneth Albright, M.D., S. A. Surgeion, U. S. Public Health Service, 1238 pp., Illus., The Williams & Wilkins Co., Baltimore, $10.

This text contains much valuable information for the doctor in practice; newest remedies are mentioned including an evaluation of the Kenny treatment. Recent information is set forth on the use and dosage of newly developed drugs. Clear and concise, yet detailed enough to include a thorough consideration of the treatment of the patient as a whole, as well as that of his disease. The subject covers a wide field; sound, practical information concerning therapeutic measures provides complete working knowledge of 21 separate categories with many subdivisions. Contents: The Case History, Nutrition and Vitamin Deficiency Diseases, Disorders of the Digestive Tract, Diseases of the Blood and Blood Forming Organs, Diseases of the Heart, Peripheral Vascular Diseases, Diseases of the Kidney, The Diagnosis and Management of Venereal Diseases, Diseases of the Respiratory System, Arthritis and Allied Conditions, Endocrinology for the General Practitioner, Diseases of Allergy, Diseases of Intoxication, Infectious Diseases, Infectious Diseases of Post War Importance, Nervous and Mental Diseases, Diagnosis and Treatment of Common Skin Disorders, Chemotherapy, Geriatrics: The Care of the Aged, The Care of the Ambulatory Patient, Clinical Laboratory Medicine.

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SHEEN IN HAND LOTION: I have attempted to manufacture a hand lotion with a pearly or silvery sheen but with little success. I will appreciate any information you may offer. Newark.

Production of a sheen in a hand lotion is often dependent upon skill and thorough mixing during manufacture. Perhaps something along the following lines will produce a product more like what you want:

Glyceryl monostearate	**3.5**
Stearic acid	**2.5**
Glycerine	**5.0**
Alcohol	**5.0**
Triethanolamine	**1.0**
Water	**83.0**
Preservative and perfume	**sufficient**

Melt the glyceryl monostearate and stearic acid with the glycerine and about 50 parts of water, and bring to 90° C. Stir well. Dissolve the preservative and perfume in the alcohol. Place the remainder of the water and the triethanolamine in another vessel and bring to the same temperature. Add slowly in a thin stream to the first solution with stirring. When cool add the alcoholic solution and stir again. Allow to stand overnight. Stir briefly, strain and package.

NAVY INSECT REPELLENT: The American Navy's Institute for Medical Research has produced something against insects called NMRI 448. Will you please give us the composition of this repellent and where information can be obtained concerning it? Upsala.

NMRI 448, one of several insect repellents developed and tested by the Navy, consists of:

2-phenyl cyclohexanol	**70 per cent**
2-cyclohexyl cyclohexanol	**30 per cent**

This and a number of related products were discussed and compared in considerable detail in an article by M. Pijoan and his associates in the October 1946 issue, page 1506 of the *United States Medical Bulletin.*

INSECT REPELLENT SUNTAN LOTION: We would appreciate your sending us a formula for suntan lotions with insect repellent qualities. Long Island City.

A suntan lotion could undoubtedly be given insect repellent qualities by incorporating a suitable proportion of dimethyl phthalate; providing there is no incompatibility with the other ingredients of the lotion. Oil type lotions are particularly suitable for this purpose and quite a number of formulas for oily suntan products have been published in DRUG AND COSMETIC INDUSTRY.

COLD CREAM: Please furnish me if possible, with a good marketable formula for a cold cream. Any help you can give me will be greatly appreciated. San Francisco.

A quite standard cold cream, Ointment of Rose Water, is described in the U.S.P. However, I think a product along the following lines is more in the order of what you want:

White beeswax	**7.0**
Paraffin	**10.0**
Ceresin	**3.0**
White mineral oil (65-75)	**44.0**
Borax	**1.0**
Water	**34.5**
Perfume	**0.5**

Dissolve the borax in the hot water. Separately, melt the various waxes together and add the oil. Keeping the temperature at about 70° C., pour in the borax solution at the same temperature, with constant stirring. Then mix without heat for about one and a half hours. When cooled to about 45-50° C. add the perfume.

PARAFORMALDEHYDE: I am anxious to get information on formaldehyde in a powder form if such is available. Los Angeles.

Formaldehyde is a gas and is generally available as a solution in water. What you probably mean is paraformaldehyde. This is a white crystalline powder having an odor of formaldehyde. It is slowly soluble in cold, more readily in hot water, with the evolution of formaldehyde.

NAIL POLISHES: Will you please let me know a formula for a plastic nail polish or nail lacquer? Pawling.

The production of lacquer for nail polishes is a highly specialized field and one which requires considerable experience and knowledge. It is most general in the industry to purchase prepared nail polishes from one of several manufacturers and to distribute the product under a private label. However, if you should wish to experiment rather than purchase the finished lacquer, you might try the following as a basic formula:

Nitrocellulose (½ Second Vis.)	**10.0**
Ethyl acetate	**50.0**
Butyl acetate	**20.0**
Diethyl phthalate	**15.0**
Camphor	**4.5**
Color (Dye)	**0.5**

Dissolve the nitrocellulose and the camphor in the ethyl acetate. Add the rest of the ingredients. Perfume and color as desired.

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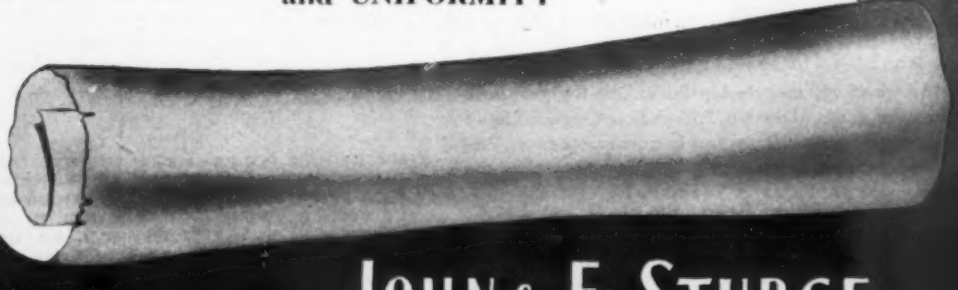

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LIQUID ANTIPERSPIRANT: Can you suggest a simple formula for an excellent antiperspirant, liquid type? We desire one of the long lasting products, yet non-irritating, which can be made with simple equipment and without the incorporation of any alcohol. Cleveland.

The formulation and preparation of liquid antiperspirants is very simple. A 13 per cent. solution of aluminum chloride in distilled water represents a perfectly satisfactory product. A concentration of 15 per cent. is considered the maximum. The addition of urea is recommended as a buffer, making the action of the solution milder and thus reducing the chances of irritation.

Aluminum chloride	**130**
Urea	**130**
Distilled water	**840**

Dissolve the aluminum chloride and urea in the water and filter. The solution should not come in contact with metal, especially not with iron.

VETERINARIAN SOAP AND DISINFECTANT FOR INSTRUMENTS: I am interested in a liquid soap preparation suitable for use of veterinarians, etc., after or before operations and for a liquid in which to immerse instruments to disinfect them. Detroit.

It seems to me that tincture of green soap should be quite suitable as a liquid soap for use by veterinarians. If the tincture is objectionable, perhaps a diluted solutioun of ordinary soft soap U.S.P. would prove satisfactory.

Diluted saponated solution of cresol has often been used as a cold liquid sterilizing agent for disinfecting instruments by immersion. Another cold sterilizing solution which could undoubtedly be used for this purpose is the one given in the "Pharmaceutical Recipe Book" as follows:

Solution of formaldehyde	**554.0 cc.**
Sodium borate	**62.5 Gm.**
Distilled water, sufficient to make	**1000.0 cc.**

I should also like to call your attention to the instrument sterilizing solution originally described by M. L. Tainter and his associates. The formula for this solution has been repeated on page 274 of the August 1946 issue of our publication.

BLEMISH COVERING CREAM: I am contemplating the making of a cream to hide face blemishes so that it could cover the blemish and then permit powder to be put over it. I want to make it in several colors to match the complexion. Will you please advise a suitable formula for same and how to obtain the various colors. Chicago.

Probably as good a product of this type as any can be made by the incorporation of a substantial amount, better than 5 per cent of titanium dioxide in any satisfactory cream base. Vanishing creams will generally be preferred because they are non-greasy and will not leave an oily luster on the spot to which they are applied. Most important of all, however, the titanium dioxide, which is a white pigment of high covering power, will have to be tinted so that it blends quite well with the skin color. A preparation of this type can be removed quite easily from the skin with water. These covering creams can be tinted to any desired shade by incorporating suitable pigments. If such pigments have good hiding properties they may be substituted for a portion of the titanium dioxide.

BRUSHLESS SHAVE CREAMS: We understand that you occasionally furnish information on general or basic cosmetic formulas. Have you any such information on brushless shaving creams containing sulfonated oils or other synthetic detergents? Oakland.

A brushless shaving cream containing sulfonated oil can be made along the following lines:

Cetyl alcohol	**3.0**
Stearic acid	**22.0**
Potassium hydroxide (sticks)	**1.0**
Sulfonated olive oil	**3.0**
Glycerine	**15.0**
Water	**55.5**
Perfume	**0.5**

Melt the stearic acid and cetyl alcohol in the olive oil. Dissolve the potassium hydroxide in the water, add glycerine and stir into the melted fats. Mix until a smooth, white cream is formed and when the temperature drops to about 40° C. add the perfume.

A preparation containing a synthetic detergent, such as sodium lauryl sulfate, consists of:

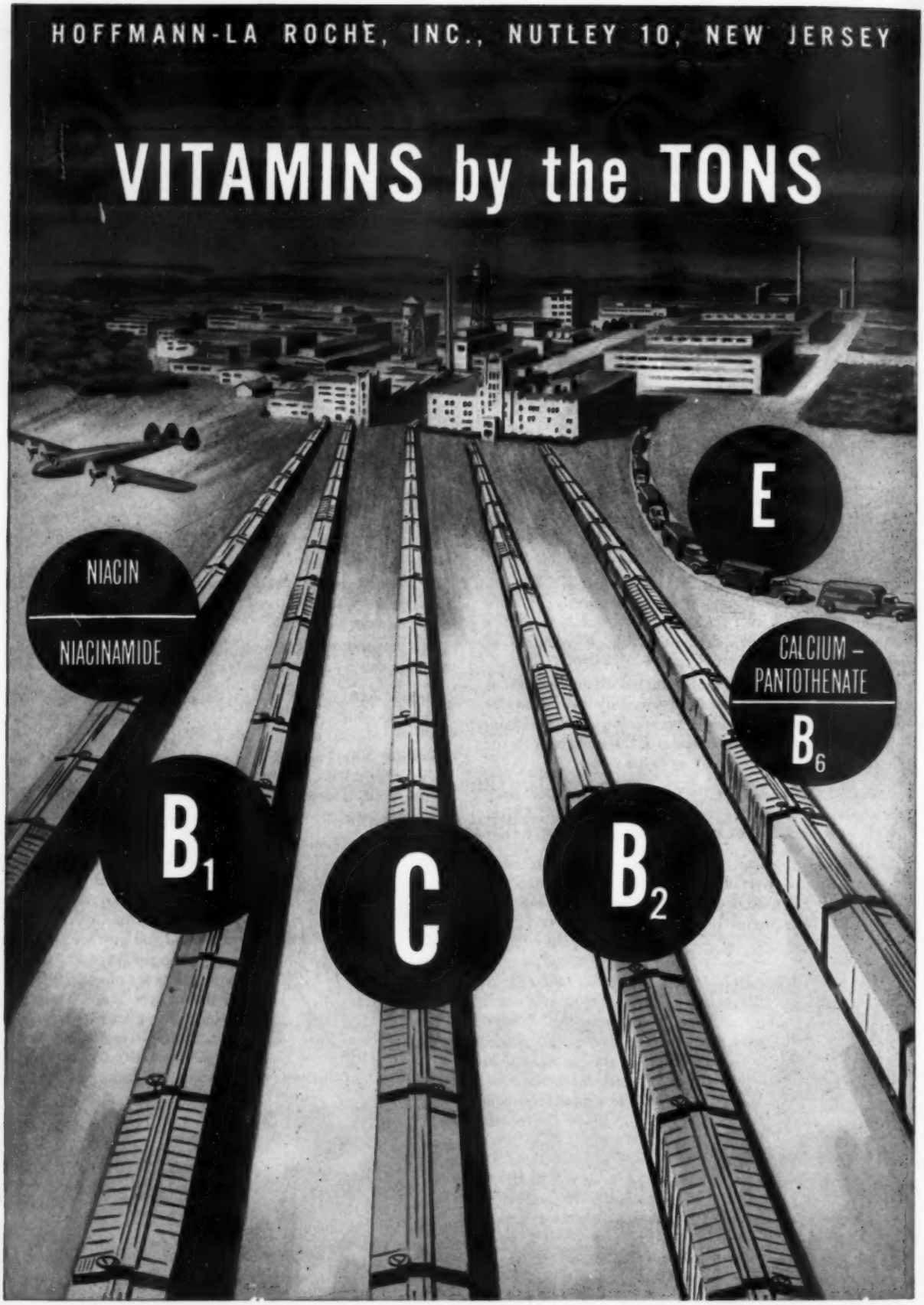
Stearic acid	**20.0**
Cetyl alcohol	**4.0**
White mineral oil	**3.0**
Sodium lauryl sulfate	**4.0**
Glycerine	**10.0**
Potassium hydroxide	**0.7**
Water	**58.3**

CLEANSING PADS: I am contemplating putting out a line of cleansing cream petals. As a subscriber to DRUG AND COSMETIC INDUSTRY, *could you give me formulas for impregnating of the pads? Toronto.*

The solutions are of various types. One standard type is a clear watery fluid containing a small proportion of alcohol and a hygroscopic agent, plus a small quantity of a detergent. A solution of this type for impregnating pads may be made from:

Alcohol	**5.0 per cent**
Glycerine	**5.0 " "**
Detergent	**1.0 " "**
Water	**89.0 " "**
Preservative	**sufficient**
Perfume	**sufficient**

The detergent should be neutral in character, and preferably a wetting agent of the liquid type, or one that is easily soluble in water.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PURCHASING DEPARTMENT

Period of Freedom from Price Control Shows Fine Chemical Prices Firm; No General Advances Indicated

The leading price features in the fine chemical market during this first period of freedom from price control were the sharp increase in all grades of glycerin, a rise in acetanalid, and a sharp jump in alcohol. Zince oxide, stearate, caffeine, and coumarin were also higher in price but the advances were more moderate than in glycerin and alcohol.

Inquiry among the manufacturers of most drugs and fine chemicals developed few actual changes in prices but pointed to the probability of higher quotations being eventually established on a number of them. Nothing resembling a general advance in prices prevailed. Conservatism seemed to govern the market. Eventually actual production costs will probably warrant some price advances but freedom from OPA price restraints brought no broadscale mounting to the higher price levels generally.

A glycerin price rise had been expected ever since price controls had been withdrawn from virtually all raw materials for the production of crude and refined glycerin. The advance in alcohol prices was also generally considered to be long overdue.

A number of small but important arrivals of scarce alkaloids made their initial 1946 appearance on customs lists. Among these were quinine alkaloid, quinine salts and derivatives, cinchonidine and salts, and cinchonine and salts, all four from the Netherlands.

Penicillin production for July and August, reported by the Civilian Production Administration, totaled 1,958 and 2,234 billion units, respectively. Allocations for September aggregated 3,189 billion units.

Vitamin A production during the first 6 months of 1946 amounted to 27.5 trillion units as compared with 28.4 trillion units produced during the comparable period last year.

Glycerin Advances Sharply

A new and sharply higher price schedule has been established on glycerin reflecting steadily rising costs of oils and fats as well as increased labor and warehousing costs. At least three major producers are quoting 55c a pound for tankcar quantities of chemically pure, high gravity and dynamite, and one large producer has advanced prices to as high as 70c per pound. However, the inside figure of 55c per pound is said to be from 25c to 30c per pound below what it would cost to import material. Another important factor in the glycerin market is that, even at the new price levels, little or no material is available to other than regular customers.

Alcohol Up

Producers of alcohol advanced prices on an average of 28½c per gallon during the current trading period. It was an upward revision long overdue. Such a novement was scheduled as far back as last June and just before OPA lapsed on June 30, that body had been about ready to order a general rise to compensate for increased production cost. When OPA lapsed for about a month, nothing was done. And nothing was done until President Turman ended OPA price control and full control of prices was returned to the industry. New prices prevailing on tankcars were: CD14, 83c per gallon; SD1, 82½c per gallon; SD2B, 82c per gallon; SD23G, 86½c per gallon; SD23H, 82½c per gallon; SD29 83c per gallon.

Menthol Quiet

Trades in menthol continues quiet. The trade here has been anxiously awaiting the results of the sale of Japanese menthol. Meanwhile with increasing quantities having recently arrived from China, the Brazilian market has turned easier.

The 1946 output of menthol crystals in Sao Paulo, Brazil, is estimated officially at about 120 tons. Approximately 500 tons of crystals were produced in 1945, but that amount was more than could be absorbed by the United States, the main buyer at that time.

The area planted to mint in Sao Paulo in 1946 decreased sharply to 7,500 hectares, from 38,020 hectares in 1945. The yield of mint oil amounted to 1,033,474 kilograms in 1945 and 200,000 kilograms this year.

(Continued on page 859)

NOVEMBER PRICE CHANGES

UP

Acetanilid 7c
Alcohol 28½c
Amyl acetate 20½c
Apricot kernel oil 5c
Balsam Tolu 10c
Bismuth subcarbonate 90c
subgallate 91c
subnitrate 69c
Bois de rose, Brazilian 15c
Caffeine alkaloid 60c
citrated 45c
Cardamom oil $1
Castor oil 13c
Collodion 4½c
Coumarin 50c
Dill oil 50c
Ethyl acetate 7c
Glycerin 36½c
Hemlock oil 5c
Iodine resublimed 35c
Tincture 80c
Iodoform 50c
Jalap root 3c
Magnesium stearate 16½c
Papain 50c
Potassium iodide 25c
Safrol 20c
Senega root 35c
Sodium iodide 30c
Spermaceti 15c
Spruce oil 5c
Stearic acid TP 17¾c
Thymol iodide 85c
Turpentine 5c
Wormseed oil 40c
Zinc oxide 1¾c
Zinc stearate 16c

DOWN

Almond oil bitter 40c
Anise oil 20c
Arnica flowers 5c
Asafetida 5c
Candelilla wax 5c

(Continued on page 861)

• Prices quoted in this section were current on the first of this month.

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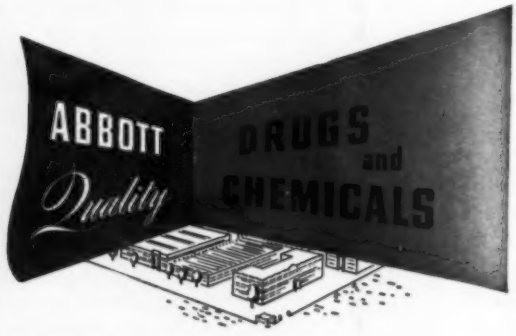

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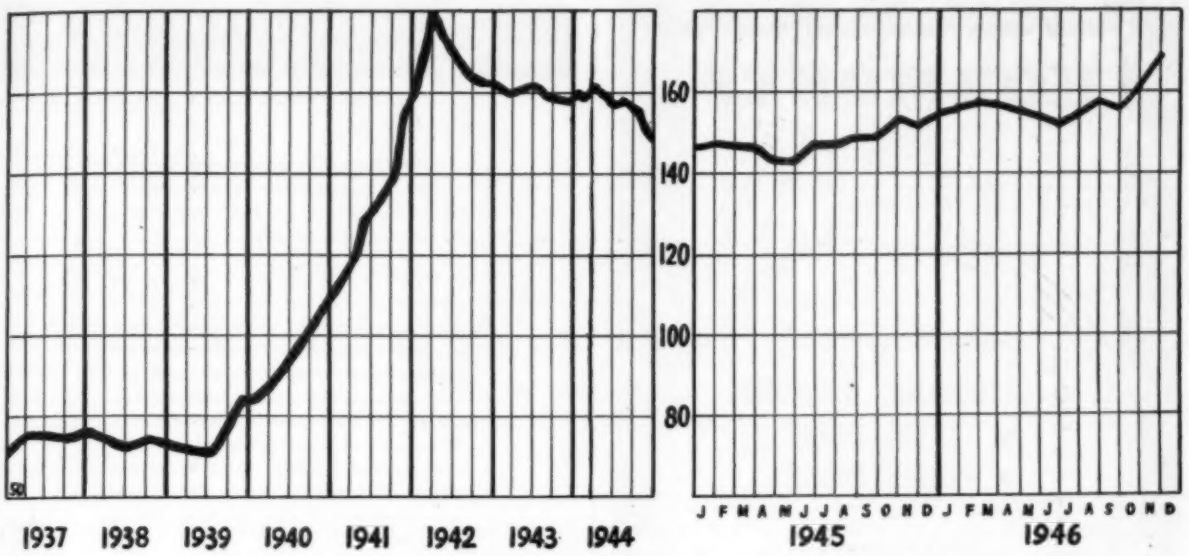
50 Raw Materials—Weighted Price Index. 1926=100.



The price index of fifty commodities for November advanced from 161.6 to 170.1.

Essential Oil Prices Mixed in Trend; No Indication of Price Manipulation Because of OPA Demise

The essential oil market during the trading period under review presented a mixed aspect. The almost equal number of oils which increased and decreased in price would seem to indicate that the revisions were a direct reflection of the market picture in the individual oils rather than indicative of an overall tendency to sponsor false interest by manipulation of prices.

Those oils which were quoted at higher prices have been firming for many weeks due to tight supply and rising prices at the source. The supply position of oils which were offered at lower prices had been undergoing steady improvement making it possible for dealers to pass on benefits to consumers.

Imports of raw materials are exhibiting gratifying increases and indications are that both the supply and price of the majority of oils will decidedly improve in the not too distant future.

By and large, the outlook for the essential oil market during the Winter and early Spring months is more promising than was heretofore anticipated.

Anise-Cassia Down

The supply position of Chinese anise oil continued to improve during the current trading period, effecting a decrease of 15c per pound in spot quotations. The oil was offered in a range of from $1.25 to $2.75 per pound with the majority of trading still centering in the low priced oils.

There was a reduction of 50c per pound in cassia oil during the period with quotations now ranging from $3.50 to $6.50 per pound.

While both cassia and anise oils have been declining steadily for some time now it is pointed out that they are still far out of line with prewar levels.

Decline In Exports of Lime Oil

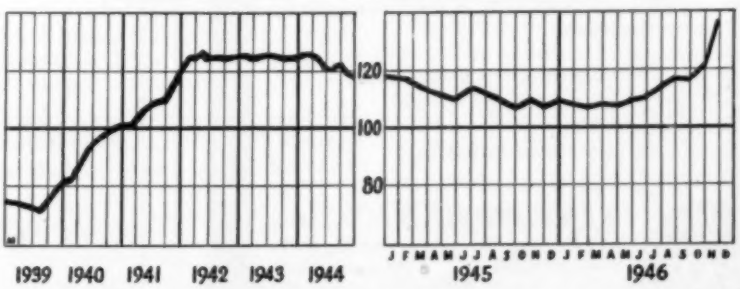
Exports of distilled lime oil from the British West Indies declined markedly in 1945. Shipments in 1945 from Trinidad, the most important source of lime oil in the Caribbean area, amounted to 23,300 pounds, compared with 32,870 pounds in the preceding year. Exports of hand-pressed lime oil from Trinidad in 1945 totaled 350 pounds; no shipments were made in the following year.

Exports of distilled lime oil from other islands in the West Indies in 1945 (with 1944 figures in parentheses) were as follows: Dominica, 19,745 pounds (40,706); Grenada, 3,400 pounds (5,680); Montserrat, 299 pounds (555); St. Lucia, 4,175 pounds (4,348).

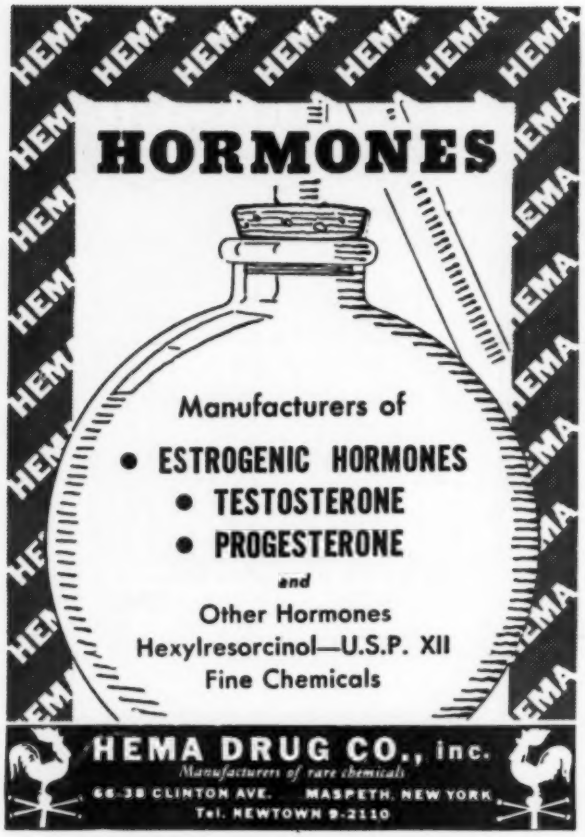
British Guiana exported 9,011 pounds of distilled lime oil in 1945, slightly more than double the 1944 figure of 4,050 pounds.

The price per pound of distilled lime oil exported from Trinidad to the United States dropped from U. S. $7 in 1944 to U. S. $6.50 in 1945, and U. S. $5.50 in 1946. Hand-pressed lime oil was exported to the United States in 1944 at U. S. $11 per pound, compared with $10 per pound for one small shipment in March 1946.

15 Medicinal Chemicals—Weighted Price Index. 1926=100.



The medicinal chemicals index was up to 158.3 from the previous 144.0. This was primarily due to the sharp increase in alcohol.



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In recent years there has been such a steady falling off of lime production in Trinidad that the outlook for future lime oil exports is very unfavorable. The decline in the fruit crop is reportedly due to a root disease.

Exports of Clove Oil

Zanzibar's exports of clove oil during the 12 months ended June 30, 1946, amounted to 565,046 pounds. The chief purchasers were the United Kingdom, the United States, and Australia. Exports in the second quarter totaled 82,433 pounds, most of it going to the United Kingdom. Supplies were insufficient to meet the large demand from other countries.

Rose Cultivation, S.S.S.R.

The essential oil plants of the Kuban district in the U.S.S.R. (Northern Caucasus) completed the processing of this year's crop of the Kazanlik-rose petals by the end of September, reports the Soviet press. The collective farms of two of the Kuban counties gathered 150 tons of rose petals from their rose fields.

The Labinskaya and the Otradnenski counties are at present preparing 30 additional hectares of land which will be added to the existing rose plantations. By the end of the current 5 year plan, Kuban will have 350 hectares producing the Kazanlik rose.

Miscellaneous

The vanillin situation remains in a very tight position. Little activity is reported in Pachouli because of the abnormally high level of prices. Lower futures are expected. Only limited amounts of oil wintergreen are available at high levels. Prices on peppermint oil are maintained while spearmint remains virtually nominal. Sandalwood, lemongrass, Ceylon citronella, and bergamot oils are fully maintained due to small supplies. Bois de Rose was up slightly to $5.30. Cardamom jumped sharply to $19 because of rising prices in the Indian market. Increasing availability of lower-priced root oil sponsored a 50c per pound decrease in quotations for ginger, now offered inside at $10.50. Accumulation of stocks at Brazilian sources resulted in a decrease of $1.15 per pound in the spot price of oil mandarin. New price $5.25.

Menthol Quiet

(*Continued from page 855*)

Overproduction of mint and menthol crystals in 1945 caused the price of crystals to reach a low of 120 cruzeiros per kilogram. The average price in 1944 was 374.89 cruzeiros. Despite the growing European demand for Brazilian menthol, the average price per kilogram during the first half of 1946 was 118.25 cruzeiros. Thereafter the price of menthol advanced rapidly until it reached 325 cruzeiros per kilogram on September 1st.

The majority of planters experienced heavy losses in 1945, inasmuch as they had leased or purchased land at excessively high prices and had been paying pickers top wages. Retrenchment followed in 1946. No significant increase in menthol production is indicated for 1947.

Exports of menthol through the port of Santos during the first 6 months of 1946 amounted to 166,959 kilograms. Of this amount 94,182 kilograms went to the United States and 37,655 kilograms to Great Britain. France, Switzerland, Spain, and Sweden were other markets. In 1945 exports of menthol totaled 568,409 kilograms, the United States taking 454,019 kilograms; Great Britain, 71,266 kilograms; and Sweden, 21,568 kilograms.

Mint-oil exports during the first half of 1946 totaled 64,946 kilograms. The United States purchased 6,294 kilograms; Great Britain, 31,388 kilograms; and France, 16,846 kilograms.

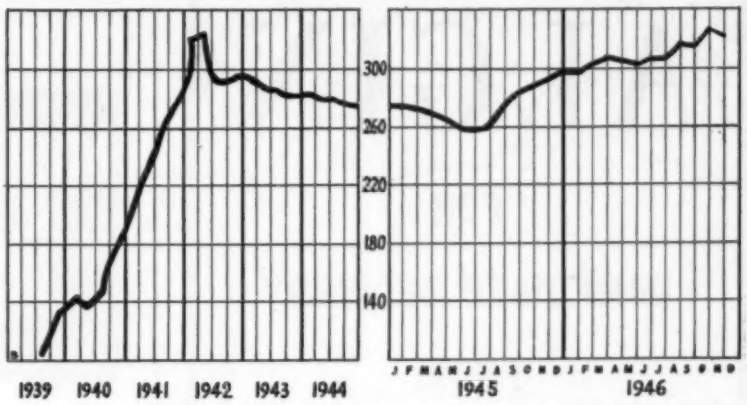
As of July 1, 1946, stocks of mint oil amounted to about 20 tons and of menthol crystals, between 150 and 200 tons.

Camphor Up

Prices on synthetic powdered camphor have been advanced 7c per pound, reflecting higher crude material costs. Deliveries are continuing to run far behind schedule and in the face of steadily rising costs of turpentine a generally firmer schedule is expected.

The new prices on powdered material as announced by one maker is as follows: 2,000 pound lots 76c 1,000 pounds, 77c and 100 pound lots 78c a pound.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index declined to 338.2 from the previous 340.5. Balsam Tolu was up; ipecac was sharply lower; rhubarb declined 5 cents.

Bismuth Preparations Higher

Leading manufacturers of bismuth preparations announced a price advance in these items and now quote, without offer and subject to change without notice, as follows: Bismuth subnitrate 200 lb. drum $2. per lb., 25 lb. drum $2.03 per lb.; bismuth subcarbonate 200 lb. drum $2.40 per lb., 25 lb. drum $2.43 per lb.; bismuth subgallate 200 lb. drum $2.35 per lb., 25 lb. drum $2.38 per lb.

Mercury Supply Ample

Recent reports from the trade indicating that domestic mercury production was about at an alltime low have failed to give the correct picture. Production in the third quarter of this year declined 7 percent from that in the second quarter while imports rose 74 percent according to data just completed by the Bureau of Mines.

In relation to quarterly averages for the prewar period, 1935-39, production of mercury was 49 percent higher and imports were 216 percent higher. Third quarter imports were 23 percent greater than production and were large enough to provide for consumption requirements.

Consumption dropped 13 percent in the third quarter, the bureau reports, but continued at 8 percent above the prewar quarterly average. As a result of the foregoing, stocks in producers and

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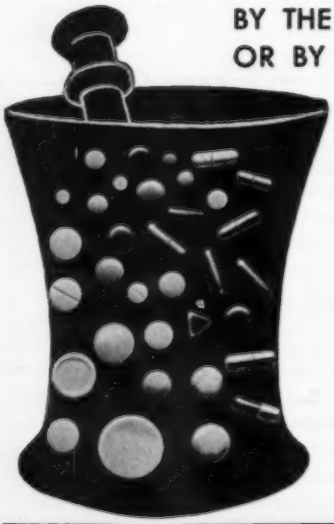

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consumers hands rose 22 percent in the third quarter.

Mercurials fail to show any change despite the fact that the metal is available at a much lower level.

Cod Liver Oil Production and Exports, Iceland

Iceland's exports of cod liver oil increased to 5,018 metric tons in the first half of 1946 from 4,351 tons in the comparable months of 1945. In both periods the United States and Great Britain were Iceland's best customers.

During the 1946 period the United States took 3,611 metric tons, compared with 2,056 in the first 6 months of 1945. Great Britain imported 600 metric tons from Iceland throughout the first half of 1946, a sharp reduction from 1,152 tons in the life period of 1945.

Production of cod liver oil during the early months of 1946 continued at about the same level as in the comparable period in the preceding year. Approximately 4,500 metric tons were processed between January 1 and May 31, 1946.

Iodine Higher

The Chilean Nitrate Sales Corp. announced that the price of Chilean crude iodine will be $1.50 per pound, less 5 percent, ex warehouse Staten Island, N. Y. "We shall continue, until further notice, to accept orders for delivery up to three months from date of contract, and will protect against decline in our price above stated for 90 days from date of invoice," the announcement states.

The previous price for crude iodine was $1.28½c per pound in 150 pound kegs.

Price of Insulin Jumps 50 P. C.

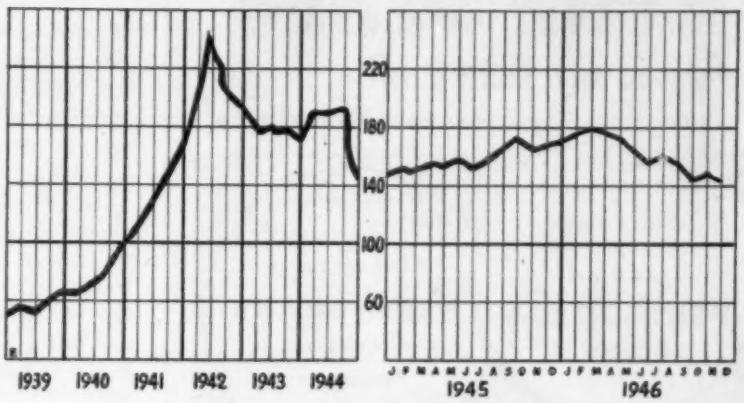
The price paid by insulin manufacturers for raw pancreas used in the drug has more than doubled since the expiration of OPA and the cost of insulin has gone up 50 percent, a spokesman for the packers said.

Insulin is manufactured from the pancreas gland of hogs and cattle, a waste product of the packing industry.

It is reported that the price now paid the packers for pancreas is 34c a pound, compared to 16c under OPA and 8c to 12c a pound before the war.

The 34c price resulted the day after the death of OPA, it is reported, when one large insulin manufacturer offered that price to packers. Other drug houses followed suit.

15 Essential Oils—Weighted Price Index. 1926=100.



The essential oils index declined to 141.1 from the previous 142.7. Anise oil and cassia oil were sharply lower; Bois de Rose was up to $5.30.

Saccharin Scarce

An intensive hunt goes on every day in every city in quest of saccharin. If there is a worse postwar shortage in America, we haven't heard of it. Saccharin, dulcine, peryllartine, and other sweetening agents have been virtually cleaned out of the trades, aside from what might be picked up in the black market. There is no saccharin to be had at resale and dealers refuse to handle the item.

The factors in the saccharin headache are threefold, and all of them are formidable: (1) the plant of the leading manufacturer was strike-bound from June to mid-October; (2) demand for saccharin has vaulted spectacularly due to the general sugar shortage, and (3) the $1.65 per lb. ceiling on the product has rendered new production impossible.

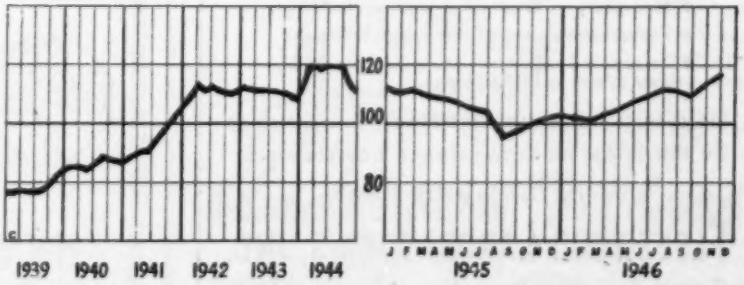
Stearates Up

Due to sharp increases in the cost of basic crude material, it has been necessary for manufacturers to raise the price of stearates with the following schedules now prevailing: Calcium stearate technical 50 lb. lots 48½c per pound; calcium stearate purified, 50 lb. lots, 66½c per lb., calcium stearate impalpably powdered, 50 lb. lots, 50c per lb.; magnesium stearate purified, 50 lb. lots, 51c per lb.; zinc stearate 50 lb. lots, 50c per lb.

PRICE CHANGES (Down)
(*Continued from page 855*)

Cassia oil Redist. 50c
Chamomile flowers, Hung. 20c
Ginger oil 50c
Golden seal root 25c
Ipecac root $1.25
Juniper wood oil 18c
Lavender spike oil 30c
Linalool 25c
Mandarin oil 35c
Mastic gum 30c
Mercury $1
Methyl Cinnamate 25c
Origanum oil 45c
Petit grain oil 40c
Rhubarb root 5c
Vetiver oil Java $1.50

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



The cosmetic raw materials index advanced to 117 8 from the previous 115.9. Alcohol, Balsam Tolu, glycerin, spermaceti, stearic acid, and zinc oxide were higher; candelilla wax declined.

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Air Sterilization

(*Continued from page 722*)

tures are used in accord with the size of the room and if they are correctly distributed, the area will be covered with rays of effective intensity. With well placed equipment and normal air circulation most of the particles in the air will be subjected to ultraviolet, bactericidal radiation.

The generation of ozone, which can be quite toxic, is another problem with ultraviolet radiation. However, ways have been devised to help overcome this difficulty.[30-34] In view of the great importance of proper design of ultraviolet installations in governing adequacy and safety it is very significant that progress is being made in the formulation of appropriate specifications.[35, 36] The development of such standards will of course help to advance the already wide use of ultraviolet installation for air disinfection.

So many reports on the use of ultraviolet rays for air sterilization have been published that it is impossible to cite more than a few of the indicative studies. For example, the successful use of ultraviolet radiation as a means of reducing cross-infection in infants' and children's wards has been discussed in some detail by Robertson and her associates.[37] The value of radiant disinfection for reducing susceptibility to measles, chicken-pox and mumps among children in day schools has been indicated by Wells.[38] Work along these lines is being done on a fairly large scale and the results so

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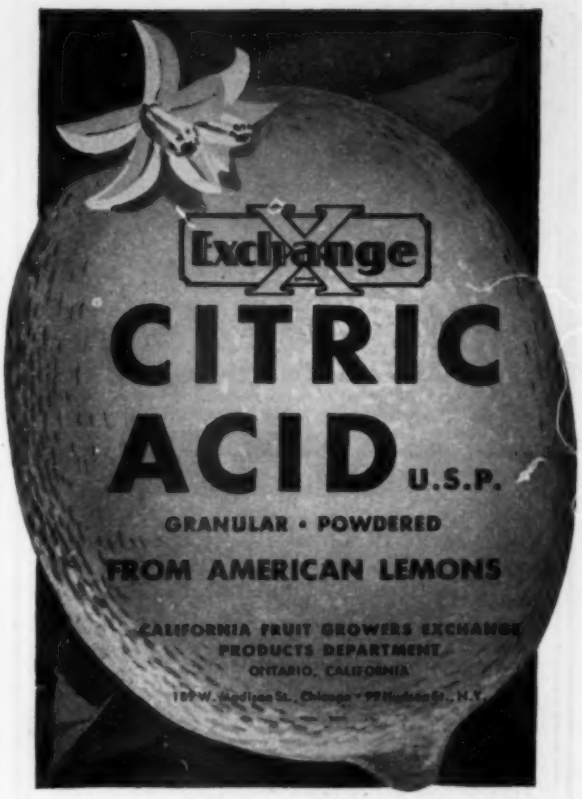
far are quite promising.[39] The usefulness and limitations of ultraviolet light control of air-borne infections in barracks has been the subject of a report by Wheeler and his coworkers.[40] Several investigators[41,42] have also reported the effects of ultraviolet radiation on cross-infection in the operating room and at the operating table.

Considerable interest has been aroused by Lurie's[43] studies on the effect of ultraviolet rays on tuberculosis. In this experimental work he was able to prevent the transmission of tuberculosis from infected to susceptible rabbits by irradiation. From this data, Lurie feels that it is probable that ultraviolet radiation may control air-borne contagion of human tuberculosis.

Aside from its potentialities for the control of air-borne infection in hospitals, schools, institutions, barracks, churches, theaters, industrial plants and other places where people gather, ultraviolet radiation has found a number of valuable uses in other fields. Pharmaceutical manufacturers have used it quite extensively to prevent contamination in their laboratories and in the production of vaccines, sera, penicillin and other drugs.[44,45] Ultraviolet lamps have found use to combat spoilage in food processing plants and have even been used in refrigerators as an added precaution against molds and bacteria. In zoos and on the farm, ultraviolet radiation is being employed to prevent cross-infection among animals.

The third approach to the problem of air sterilization



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The Republicans now have more Presidential Potentialities than FDR had reelections.

•

Suggested headline on the removal of price ceilings: "Nation Blows Its Top."

•

If the Stock Market is supposed to be a barometer of political opinion, it needs a new injection of mercury. Levels continue to fall for Democrats and Republicans alike, irrespective of House majorities.

•

The market, to be completely frank, has plenty of supposedly bright investors walking around with their bare assets exposed.

•

The changes for our own industry are no more significant. Tommy Manville and other over age playboys have done more to stimulate interest in hormones than all the legislation in Louisiana.

•

No wonder the world's embattled, with so many governments exchanging "right" and "lefts" and vice versa.

•

Belated thought on the War Crimes Executions: Doctors proved that Goering went to his death with a greater navel secret than Grand Admiral Raeder.

•

But Winchell's observation on Goering is still tops: "Give a rat enough rope—and he'll take poison."

George Fiedler

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has been the use of oils and emulsions to prevent the spread of dust particles which harbor many kinds of infectious micro-organisms.[4, 16] Thus, floor dust and bedclothes have been found capable of harboring millions of hemolytic streptococci. What part these bacterial "reservoirs" play in the spread of infection in barracks, wards, schools, homes and other places is not clearly established. Nonetheless, the development of adequate dust and lint control methods has become a very important means of preventing the dissemination of pathogens through the air. The application of oils to floors and bedding for the purpose holding dust, lint and bacteria has been found to be highly effective.[46]

While the use of oils on floors alone[47] or bedding alone[48] will cause a reduction in the number of dust-borne bacteria, it is obvious that a combination of the two measures will produce optiomal results.[49] For instance, the results obtained by Wright and associates[50] showed that oiling of floors alone was not sufficient to reduce the spread of streptococci in wards, but when both floors and bed cloths were oiled there was an average reduction of 97.5 per cent in the streptococcal count in the air during bed making, and that the average total bacterial count was reduced by 91 per cent. They also observed that the cross-infection rate was reduced to 18.6 per cent in the treated ward as compared with 73.3 per cent in the untreated control ward.

A number of materials have been studied with the purpose of making bacteria on floors and bed clothes stay put instead of being carried about in the air to infect other people. In the case of floor treatments, it has been found that a light mineral oil, meeting the U. S. Government Specifications for floor oil is satisfactory.[46] Of course, oils of this sort form the basis of many standard floor care products.[51]

The problem of making suitable compounds for treating bed clothes was not quite so simple. Solvent solutions of oils and oil emulsions were tried, with a definite trend toward the use of concentrated emulsions. Several effective emulsions for treating bedding and other fabrics have been described in the literature.[46, 48, 52, 53]

With the accumulation of data that is now available, scientists in the field of air sterilization have begun to evaluate the efficacy of the three basic methods. From their reports,[1, 4, 16, 46] there is apparently a growing belief that aerial disinfection combined with effective dust control measures will produce maximum reduction in the number of air-borne pathogens. In other words, air-borne infection will probably best be fought by combinations of chemical and physical methods. As things stand there is a definite trend toward the development of a specialty in engineering around air sanitation, just as has occurred in the case of milk and water sanitation.

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F. T. C. Conference

(*Continued from page 767*)

Mr. Brooks, as well as the others, were also impressed by the attitude of James A. Horton, for many years head examiner for the Commission, and now director of legal investigation for the Commission. Mr. Brooks said that Mr. Horton is particularly anxious to get all the information possible about the industry so that he will have a well rounded picture of the industry in his mind. Mr. Brooks said that Mr. Horton is most anxious to listen for any length of time to anybody who wants to give him information of the industry.

As will be recalled by those with knowledge of the older conferences, two sets of rules resulted from these conferences, Group I and Group II. Group I rules indicated compliance with law and were enforceable by the Commission, while Group II rules were practices that could be violated without violating a law but which expressed a desirable practice from the point of view of a large majority of the industry. As far as establishment of Group II rules under these new conferences is concerned, it is not believed that such rules will be established at all if more than five per cent of the members of the industry do not concur.

Melvin C. Eaton

(*Continued from page 773*)

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he retired in 1945, Frank McCartney who helped guide the steadily growing drug firm. Consolidated net sales for 1938 amounted to $4,179,458 compared with $8,848,290 for 1945 exclusvie of government sales.

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Speech Course

(*Continued from page 769*)

preparation for the banquet with which each of our schools terminates. There the class members deliver a five-minute after-dinner speech before their colleagues and the officers of the company.

The last session of the course is devoted to interviewing techniques. Members are paired, one acting as representative and the other as physician or druggist. Especial attention is given to the amenities of speaking as presented in "Courtesy Hints for Salesmen."

After each school we invited the men to write their reactions to the speech training, signing them or not, as they wished. High value was placed on the work almost without exception, and the representatives feel that they have "grown" as the result.

Perhaps even a more compelling reason for including a course in speech training for pharmaceutical representatives is revealed in a recent report from our sales division: five of the representatives who had never before been among the "top ten" for any month, are or have been there since taking the course. We believe that this specialized training contributed to their growth as salesmen and representatives. After all, "Speech was made to open man to man, and not to hide him; to promote commerce, and not betray it." Good speech is just about as valuable a trait of the successful representative and salesman as any.

Foreign Botanicals

(*Continued from page 775*)

and N.F. have done just that with the wording, "substatially free" and "free as practicable."

"Substantially free" and "free as practicable" which for enforcement purposes mean the same thing, are capable of determination. Everyone knows that many shipments of botanical drugs contain so little contamination that ordinary sampling and inspection fail to disclose any contaminants. These shipments are the yardstick for measuring "substantially free" and "free as practicable." This does not mean that one rat dropping found in a single sample from a lot say of 100 containers would result in the rejection of the whole lot. It does mean that if each of several samples contained one or more droppings the conclusion would be that the contamination was spread throughout the lot and the shipment would be rejected.

Neither is there any indication Administration officials are bending over backwards in pursuing its enforcement program. Investigation by experts within the industry invariably confirm the Administration's findings. There is no denying these drugs are bad and the industry has no quarrel with the Administration for what they are doing but on the other hand commends them highly for seeking to protect the interests of the public.

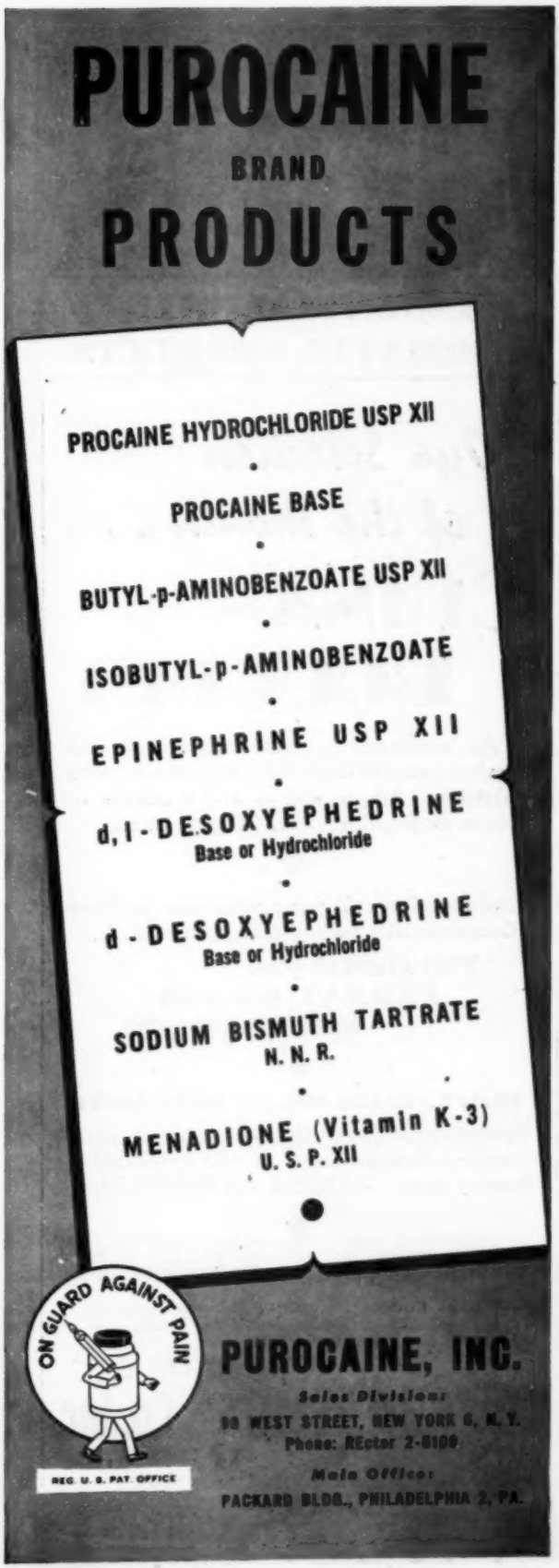
We have only encountered one instance within the last year where an importer had occasion to request the Administration to resample a drug. This speaks very highly for the efficient manner under which the Administration is conducting the investigation of each drug since obtaining a representative sample of a shipment is most difficult, particularly if, as frequently occurs, the shipment is substantial.

We accordingly must look the situation squarely in the face, realize these drugs are bad and that the contaminants are present in substantial amounts.

Such drug contamination is not confined solely to imported botanicals as a review of Notices of Judgment, published by the Food and Drug Administration, reveals numerous cases involving shipment in interstate commerce of domestically grown drugs against which the Food and Drug Administration has taken action. Here the dealer may contract effectively with the collector to supply drugs free from such contamination and moreover penalties assessed for violation of the Act have a salutary effect in correcting the situation at the source whereby the drugs will be collected under sanitary conditions to prevent such contamination.

However, foreign shippers of botanicals are beyond the jurisdiction of the Food, Drug and Cosmetic Act and the Administration can assess no penalty against them for shipping such contaminated drugs to the United States. All the Food and Drug Administration can do is to prevent such drugs from being entered into the United States.

A major problem with foreign botanicals is the lack of incentive on the part of foreign shippers to use proper precautions to select drugs free from such contamination. While American dealers invariably specify when placing their order for botanicals that they must pass customs, from time immemorial it has been customary to pay for the merchandise through a letter of credit at



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the time shipment is made from abroad. Consequently when it arrives at this country and is refused entry let the dealer try and get his money back. Caveat Emptor—Let the buyer beware.

To correct this situation may require the system of doing foreign business to be revolutionized. We are advised that one dealer has at least scratched the surface to the extent he has been able to get a few foreign dealers to agree to accept 80% of the payment when the goods are shipped and the balance to be paid if and when the botanicals pass customs. Many foreign shippers are nevertheless refusing to in any way guarantee that the merchandise will pass customs and will only sell the merchandise on the basis of "as is." This places the full responsibility on the purchaser of such merchandise and users of imported botanicals must realize there is a limit beyond which the American drug houses cannot go in tying up their capital in drugs that are detained at the port of entry and may eventually be refused entry into this country. Dealers in the United States who have sent representatives abroad to study the situation render a rather gloomy report as they can find nothing which points to any improvement in the situation in the immediate future.

Downright carelessness may be attributed in many instances as the cause of such contamination. Take for example Ergot. Very little reaches this country that is not contaminated with rat droppings. Why should European farmers find it necessary when they sieve the ergot from the grain to spread it over the barn floor where rodents may come to eat from it any grain it contains and at the same time contaminate it with filth. Simply because under the policy to get your money first, it always has been done that way. Surely it would not seem to be a stupendous job to teach the European farmer to place the Ergot in closed containers. Refusal on the part of the collectors to pay him for such contaminated ergot it would seem would readily correct the situation.

However we should not overlook the chaotic conditions in Europe, the result of 6 years of war. Equipment of all kinds is simply not available. A representative of an American house trying to process a quantity of a drug sorely needed in the United States found to his surprise it was utterly impossible to obtain in that country a medium size screen which would be used to sieve the drug to eliminate a certain foreign material. Materials from which the screen could be constructed were not available in the Balkan country. It accordingly may be anticipated that considerable time will elapse before European farmers will be able to obtain such things as wire for fencing in chicken houses to prevent the fowls from having ready access to harvested crops and metal for the construction of closed bins or containers for drug storage. It is believed, though, that there must be those abroad who realize unless something is done to improve the situation the entire future of their business may be jeopardized.

We in the United States are justly proud of our Food, Drug and Cosmetic Act; we believe we are far in ad-

vance of any foreign country in protecting the health of our citizens. We moreover are unwilling to let down the bars in any way permitting the use of such contaminated botanicals in foods and drugs. Obviously the situation may be corrected as its source and every one should work towards that end. Particularly we believe the government agencies will cooperate to the fullest extent in any program that seeks to improve the situation.

Fortunately under the Food, Drug & Cosmetic Act after a shipment of botanicals has been detained at the port, due to such contamination, the Administration may grant permission to the importer to recondition the botanicals.

Regulation 2.309 under Chapter VIII of the Food and Drug Act states:

"(2.309) Relabeling or other act to bring article into compliance with the Act and notice. (a) The owner or consignee of an article may, at the time of the hearing or within a resaonable time thereafter, request the chief of station of the Food and Drug Administration in writing to permit the relabeling or other act with respect to such article necessary to bring it into compliance with the provisions of the Act, or to render it not a food, drug, device or cosmetic within the meaning of the definitions of such articles in section 201 (f), (g), (h), and (i) of the Act. Such request shall propose the labeling to be used and any other act to be done for such purpose, and shall specify the time and place which such proposed labeling or other act is to be done."

Such reconditioning means separating the contaminated material from the botanicals and must be done under the supervision of the Administration. After the drug has been cleaned the Administration inspects it and where an effective job has been done in thoroughly removing such foreign material the botanicals are permitted entry and may be used.

Regulation 2.310 provides:

"(2.310) Release of detained goods which have been reconditioned.

(a) (1) When the operations to be performed are under the entire supervision of the chief of the station, and these operations have been effectively and completely performed and all of the conditions imposed have been fulfilled within the time prescribed therefor, he shall give notice to the importer that the article is released insofar as the provisions of the Act relate thereto and shall send a copy thereof to the collector of customs or the appropriate customs officer; . . . ."

Often times such reconditioning results in a better quality botanical than one that moves freely into our country since the cleaning not only removes insects and filth but also foreign material permitted under the specifications for the drug.

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ment. The botanicals houses as well as outside contractors have such equipment and users of botanicals must recognize such reconditioning contributes to their ability to obtain drugs at this time. Botanical houses who effectively clean such drugs are rendering a service which a drug broker with his office under his hat cannot do.

However the huge quantity of botanicals being detained at the port of New York is seriously taxing the capacity of the available cleaning machinery and many botanicals are required to wait their turn. Everyone is familiar with the difficulties in obtaining new machinery at the present time and it is entirely possible considerable delay may be encountered before certain botanicals may be made available.

Reconditioning illustrates the soundness of the old adage, "an ounce of prevention is worth a pound of cure." In many instances the cost of removing contaminating material from the botanicals exceeds many times that which would prevent contamination. All of which is of course added to the price you pay for drugs and itself is sufficient reason why everyone should interest himself in a program to have the botanicals collected and processed under sanitary conditions. In the main it will only require an application of ordinary good housekeeping procedure practiced in the average American home.

Also it is well to keep in mind such contaminated botanicals as may be used for the manufacture of pure principles. The United States Pharmacopoeia provides as follows:

> "The official standards apply to vegetable and animal drugs as they enter commerce, whether whole, cut, ground or otherwise prepared for use with the exception that when used solely for the manufacture or isolation of fixed or volatile oils, alkaloids, glycosides, or other active principles they may differ from the standards prescribed by the Pharmacopoeia."

The statement in the National Formulary is similar. It is:

> "Vegetable and Animal Drugs. The official standards apply to vegetable and animal drugs as they enter commerce, whether whole, cut, ground or otherwise prepared for use, with the exception that when used solely for the manufacture or isolation of fixed or volatile oils, alkaloids, glycosides, or other active principles they may deviate from the standards prescribed by the National Formulary VII but any official product made from such drugs must conform to the official requirements."

Section 501 (b) of the Act provides for official drugs:

> "... No drug defined in an official compendium shall be deemed to be adulterated under this paragraph because it differs from the standard of strength, quality or purity therefore set forth in such compendium, if its difference in strength, quality or purity from such standard is plainly stated on the label ...."

Manufacturers who contemplate using drugs labeled under this provision of the Act will do well to consult the Administration with respect to appropriate label statements on the particular product for which the drug is used. This provision of the Act applies only to adulterants such as moisture, stones, sand, dirt or foreign vegetable material not too filthy, putrid or decomposed substances. The latter are provided for in Section 501 (a) previously quoted. Nor does it apply to standards other than of strength, quality or purity. Packaging requirements are not included in this provision. Section 502 (g) of the Act does provide however:

"... That the method of packing may be modified with the consent of the Aministrator."

In the case of imported botanicals to be used for such purpose it is customary for the Administration to require an affidavit from the manufacturer stating that he will use it for such purposes.

After the drug has been processed the manufacturer is required to file a statement with the Administration that he has used such drug according to the terms stated in the affidavit.

Regulation 2.312 states:

"(2.312) Articles suitable only for technical or restricted use, denaturing. (a) A food, drug, or cosmetic which is adulterated or misbranded within the meaning of this act and which is offered for import for industrial purposes must be denatured and the invoice thereof must bear a statement showing that the article is to be used for industrial purposes.

"Where, however, it is impracticable to denature such article it may be permitted entry provided—

(1) It is plainly and conspicuously labeled, in the case of food, 'inedible,' and, in the case of drugs, 'not for medicinal use.'

(2) At the time of entry the owner or ultimate consignee submits a statement in writing that the article will not be used as a food, drug, or cosmetic.

(3) At the time of entry the owner or ultimate consignee submit a statement that the article will be used in a certain suitable manner by a certain named party or parties.

(4) At the time of entry the owner or ultimate consignee agrees to furnish satisfactory proof as to the actual use of the article and the name or names of the parties who use it.

The liability under the bond given at the time of entry will not be regarded as having been satisfied until such evidence of satisfactory disposition shall have been received by the collector of customs.

(b) A food, drug, or cosmetic having but a restricted legitimate use and of such character that it can not legally be distributed for unrestricted general use, e.g., pharmacopoeial crude drugs deficient in active principle and certain substitutes for pharmacopoeial crude drugs, may be

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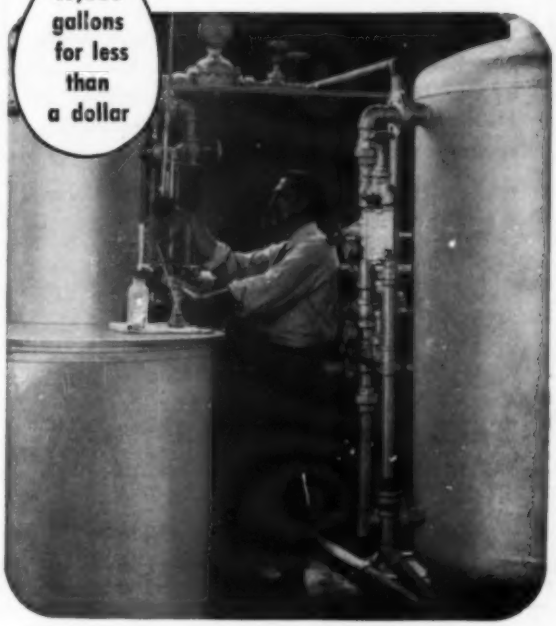

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allowed entry if properly labeled, provided suitable evidence be furnished by affidavit or otherwise that it will be used by a designated party or parties for manufacture into articles, in which it may be legitimately employed. The liability under the bond given at the time of entry will not be regarded as having been satisfied until proof of satisfactory use of the product shall have been received by the collector of customs."

Summing up, the immediate outlook for obtaining foreign botanicals especially those imported from war damaged countries, is not good. For some time to come a high percentage of foreign botanicals may be expected to be contaminated with filth and insects. The most pressing reason for this is the utter lack of equipment of any kind in these countries. Such comparatively simple materials as wire screens and metal containers are just not available. Our purchasing methods—usually by a letter of credit wherein the foreign shipper gets his money before his goods pass our customs—do little to encourage the cleaning of botanicals. What good is a guarantee under such conditions? It does seem though that any intelligent foreign dealer must realize that if enough of his goods are prevented from entering this country, his market will be ruined. Finally our Food and Drug Administration which has done so much to clean up our own botanicals is powerless to act in any foreign country. All the Administration can do is prevent contaminated foods and drugs from entering this country and the industry certainly expects and desires them to do this.

Any long range program for the improvement of botanicals must, however, be based on clean up of the drugs at the source. The problem is difficult enough in this country but not comparable to the one of trying to clean up botanicals which are being grown several thousand miles away.

Since many imported botanicals may be expected to be contaminated the best bet for the industry lies in the reconditioning of these drugs even though the increased cost of the drugs is passed on to the manufacturer and ultimately to the consumer. The Food and Drug Cosmetic Act provides for reconditioning and many botanical houses as well as outside contractors are equipped to handle it. Reconditioning more than doubles the work of the already badly harassed Food and Drug inspectors who must sample each lot twice and supervise the actual process. The problem of the Food and Drug Administration inspection force's ability to handle this additional work without undue delay is giving the Administration considerable concern. The lack of sufficient reconditioning equipment and the difficulty of obtaining new equipment may occasion further delay.

Modern Deodorants

(Continued from page 777)

action. Astringent action is manifested only when the salt is in solution and does not vary directly with the pH, although a lower pH increases astringency. Acidity

alone does not cause astringency, however, since hydrochloric acid causes inflammation rather than astringency. The formulator of an effective astringent antiperspirant is faced on one hand by increased effectiveness by a lowering of the pH and on the other by possible damage to fabrics through tendering by the acid. Modern research and the patent literature offers ingenious answers toward meeting this problem.

Many very fine astringents have properties which keep them from being ideal cosmetic products. Ferric salts, though efficient, stain. Zinc salts though widely employed in such preparations, have a strong tendency to irritate. Chromium and lead salts are toxic. Strong acid salts of thorium, cerium, zirconium, titanium have been suggested, but are apt to be toxic in addition to being costly. Of the organic astringents, the most efficient is tannic acid, though it is unstable in solution, both losing astringency and developing color. Formaldehyde is an excellent astringent as well as an antiseptic, but is quite irritating, and much too odorous to be well accepted.

Aluminum salts of weak acids are suggested by a number of authors, but most are considered impractical, due partly to their low solubility, and ineffectiveness. Aluminum acetate is a well recommended astringent, but its odor is hard to cover in a cosmetic. Aluminum aceto-tartrate and aluminum sulfocarbolate are widely used and well accepted salts, though they are frequently combined with the more astringent chloride and sulfate of aluminum rather than used alone.

The most widely used astringents are aluminum sulfate and aluminum chloride, both being markedly astringent, reasonably safe to tissues in effective concentrations and adaptable to a wide variety of preparations. A serious drawback, however, is their high acidity which in high concentrations is corrosive to the skin and will even in low concentrations rot fabrics. pH's below 3.0 will rapidly tender fabrics, especially cotton. However, the sulfate and hydrochloride of aluminum are preferred above the other strong acid salts of the heavy metals.

Many buffers and inhibitors have been tried to prevent the rotting of fabrics taking place when these and other salts are used. Though most of those now used function satisfactorily upon the skin, yet if the compounds are retained in the clothing after laundering, the use of a hot iron releases free acid from them which quickly deteriorates the fabric. The use of a simple neutralizer would not allow an effective concentration of the astringent salt, and for that reason is impractical. A few of the buffers for aluminum chloride and sulfate suggested and tried, most of them patented, are: basic alumnium formate, basic salts of low molecular weight acids, a number of amines, amides, imides, carbamates, nitriles, and a few metallic oxides. These when mixed with an appropriate strong acid salt of a heavy metal, can be used to form astringent materials of a suitable pH and of high astringent activity.

Astringents and deodorants may be applied to the skin in a variety of forms: powders, pastes, creams and

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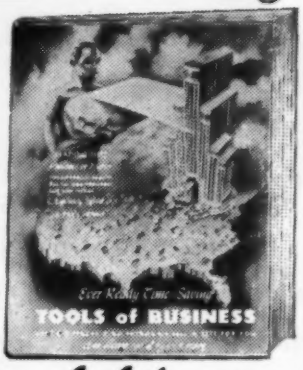

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liquids. Powders are easily prepared but are perhaps the least effective and acceptable. Liquids are widely used and effective. Many are simply aqueous solutions of the astringents, with or without buffers. However, they require waiting to dry and are inclined to injure clothing. Liquid preparations of aluminum salts do not wet the skin readily and for this reason some contain varying amounts of alcohol and glycerin, or other wetting agent.

Creams are very difficult to prepare with an effective concentration of such strong precipitants as the aluminum salts. In addition, most emulsifyers commonly used to produce emulsions of the cream type are ineffective in acid conditions. However, by use of the new wetting and emulsifying agents such as Tegacid and Aquarol, nice bases for effective concentrations are possible.

Pastes are the more common form and may be of the absorption or astringent type and permit wide variation in concentration of astringent. Zinc oxide, titanium oxide, benzoic acid and other slightly soluble compounds are used to give bulk in compounding the paste. Ease of packaging and use are also factors in favor of pastes and creams over liquids.

In summary, may we point out the following qualities which should be considered necessary in a cosmetic antiperspirant before public acceptance would be assured. Above all, the product must be effective, allowing only the bare minimum of moisture to be found under arms since many fabrics, for ladies especially, are quickly ruined by perspiration. This calls for powerful astringency, such as provided by the sulfate and chloride of aluminum. At the same time, however, consideration must be given the garments, and high acidity avoided. Low acidity of the compound when pressed into the fabric with a hot iron should be stressed.

There should be an efficient deodorizer or antiseptic included in the preparation, to take care of the small amount of perspiration that is almost inevitable. Such odors can be extremely difficult to remove from unwashable clothes, since dry cleaning fluid does not readily remove these odorous compounds.

Secondary to effectiveness, but none-the-less necessary properties of antiperspirants and deodorants are the following: The material must be non-irritant to the user and non-toxic to cells. A high standard of these qualities should be met before the product is marketed.

Qualities evaluated by the consumer and by which a product stands or falls are the following: It should be non-odorous, or of pleasant but slight odor; non-staining, of good stability in the container and of easy application. Under ease of application should be considered a pleasant consistency, ready wetting and quick drying. One might safely say that the ideal deodorant complying with all these qualifications has yet to be found.

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ABSTRACT

Modern Deodorants, Their Background and Chemistry

*By I. W. Gfote and Peggy Walker.**

As a background of this study of deodorants, the mechanism of perspiration, and the development of odor are discussed, together with the mechanism of inhibition which includes the inhibition of perspiration and the inhibition of odor. In addition, the factors involved in a successful deodorant are related. Some patent aspects of chemical agents used in deodorants and antiperspirants and bases used to incorporate them are mentioned.

The paper is intended as a review of the field and no original work is included.

Antibiotic Therapy

(*Continued from page 781*)

When we realize that we did not have these agents for practical use until four years ago, it is no wonder that we continue to be surprised at the results that are seen every day. This is real progress in an extremely important field.

What of the future? Research in the field of antibiotics is filled with unlimited possibilities. The use of both penicillin and streptomycin is limited because of their ineffectiveness against a wide variety of important infections. We need other agents that will be active against organisms and infections which are resistant to penicillin and streptomycin. We need agents that will be destructive to tumor cells and leave normal tissue cells intact. We need agents that will be effective against virus infections. New antibiotics may come from many sources, and I need scarcely tell you that many substances are being investigated. It would be surprising indeed if penicillin and streptomycin were the best that could be developed. Progress can come only from continued research and hard work. The research must be of a fundamental nature as well as being useful. Inasmuch as your organization appreciates the value of fundamental research in this field we have no fears for the future.

BREATH SWEETENER: We are making plans to manufacture a breath sweetner. This preparation is dispensed mostly in cigar stores and similar places. Can you give us some data as to the preparation of such products? Thibodaux.

One effective type of breath sweetener or breath deodorant is based on the use of chloramine. These can be prepared in the form of water-soluble tablets containing chloramine. This is dissolved in a little water and used as a mouth rinse, and are said to be very effective. I believe that tablets or lozenges containing chloramine are on the market. However, one of the simplest and quite effective breath lozenge preparations calls for the use of:

Peppermint oil	**1.0 parts**
Powdered sugar	**100.0 parts**
Mucilage of acacia	**10.0 parts**

Make into a mass and divide into lozenges weighing about one gram each. I would also suggest that you contact perfume houses listed in our publication. Many of them have bases especially prepared for use in such products.

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READERS' QUESTIONS

FACIAL MASK CREAM: I have several face creams on the market and I would like to have an egg beauty mask cream. Could you give me a formula for such a cream? Guatemala.

Egg or egg albumen was sometimes used in such products, but because of their lack of stability are seldom incorporated in commercial products. Probably an "all purpose" mask such as the following will be more suited to your need:

Bentonite	14 parts
Sulphonated castor oil	5 "
Glycerine	2 "
Water to make	100 "
Color and perfume	sufficient

Dissolve the castor oil and glycerine in water. Place water on a rapid mixer. Slowly add bentonite during agitation. Mix 15 minutes. Set aside overnight. Color and perfume. Mill product to smoothness.

CAKE MAKEUP: I should be grateful to you if you could give me a formula for a creamy but not greasy cake makeup. The use of vanishing cream has not given good results as it separates and exudes a clear liquid. Santiago.

I should like to point out that the production of many such cosmetics are covered by patents. However, a suggested method for making a cake makeup is as follows:

Pigment Blend

Talc	60 per cent
Kaolin	20 " "
Zinc oxide	5 " "
Titanium dioxide	5 " "
Light calcium carbonate	5 " "
Iron oxide colors	sufficient

This blend of pigments is first pulverized to get a uniform dispersion of color. It is then wetted with the plasticizer and binder.

Completed Formula

Pigments	81.4 per cent
Sorbitol solution	4.1 " "
Propylene glycol	2.4 " "
Sorbitan sesquioleate	9.7 " "
Mineral oil or lanolin	2.4 " "
Perfume	sufficient
Preservative	sufficient

Mix the sorbitol syrup with the propylene glycol and preservative. Spray into the powder while it is being mixed in a dough mixer. Mix the mineral oil and sorbitan sesquioleate.

If lanolin is used, melt the lanolin with the sorbitan sesquioleate. Add perfume and spray on to the powdered mass while it is agitated in the dough mixer. Transfer to a Fitzpatrick tablet granulator or an equivalent machine. After granulation the mass is ready for preforming and compression. Experimentation will be required to determine pressure necessary to compress the powdered mass. Usually between 125-100 pounds per sq. in. pressure is adequate.

SHAVING LIQUID: Would you be so kind as to give us a formula and procedure for making a lather type liquid shaving cream? Boston.

A typical formula of this sort as given by Chilson calls for the use of:

Cocoanut-oil—Cochin grade	**12.0**
Oleic acid	**12.0**
Glycerine	**10.0**
Powdered sugar	**2.0**
Sodium lauryl sulfate	**1.0**
Cetyl alcohol	**1.0**
Potassium hydroxide 85%	**6.0**
Perfume	**0.5**
Water	**55.5**

Melt and strain the coconut oil and the cetyl alcohol. Dissolve the potassium hydroxide, sodium lauryl sulfate and sugar in the water, add the glycerine and bring to a boil. Mix rapidly and add the melted cocoanut oil. Continue mixing for fifteen minutes with the heat on, then add the oleic acid slowly. Continue the heat and the mixing for ten minutes. Test for free alkali and for free oil. Shut off heat and continue very slow mixing for half hour.

LIQUID ADHESIVE: We are deeply interested in procuring formulas for liquid adhesives such as are used for applying fake eyelashes and covering bandages. The adhesives used today are an advancement over the old type collodions. Please give us a process for making such an adhesive as we wish to experiment. Boston.

The following formula, suggested by Rosenberg (*Archives of Surgery*, December 1943), has been found to produce a liquid which possesses adequate adhesive qualities and elasticity. It is capable of easy removal without leaving debris on the skin and is readily available and inexpensive.

Polyvinyl butyral resin	**20 Gm.**
Alcohol	**120 cc.**
Ether	**20 cc.**
Castor oil	**10 cc.**

The polyvinyl butyral resin is placed in the mixture of alcohol and castor oil and allowed to dissolve without stirring or agitation (admixture of air must be prevented). When the polyvinyl butyral resin is completely dissolved, the ether is added. The resulting solution is a clear, colorless liquid of high viscosity.

Although it is not so stated in the original article, it is my impression that this particular adhesive is covered by patent. However, it should give you ideas upon which you can base your own experimental work.

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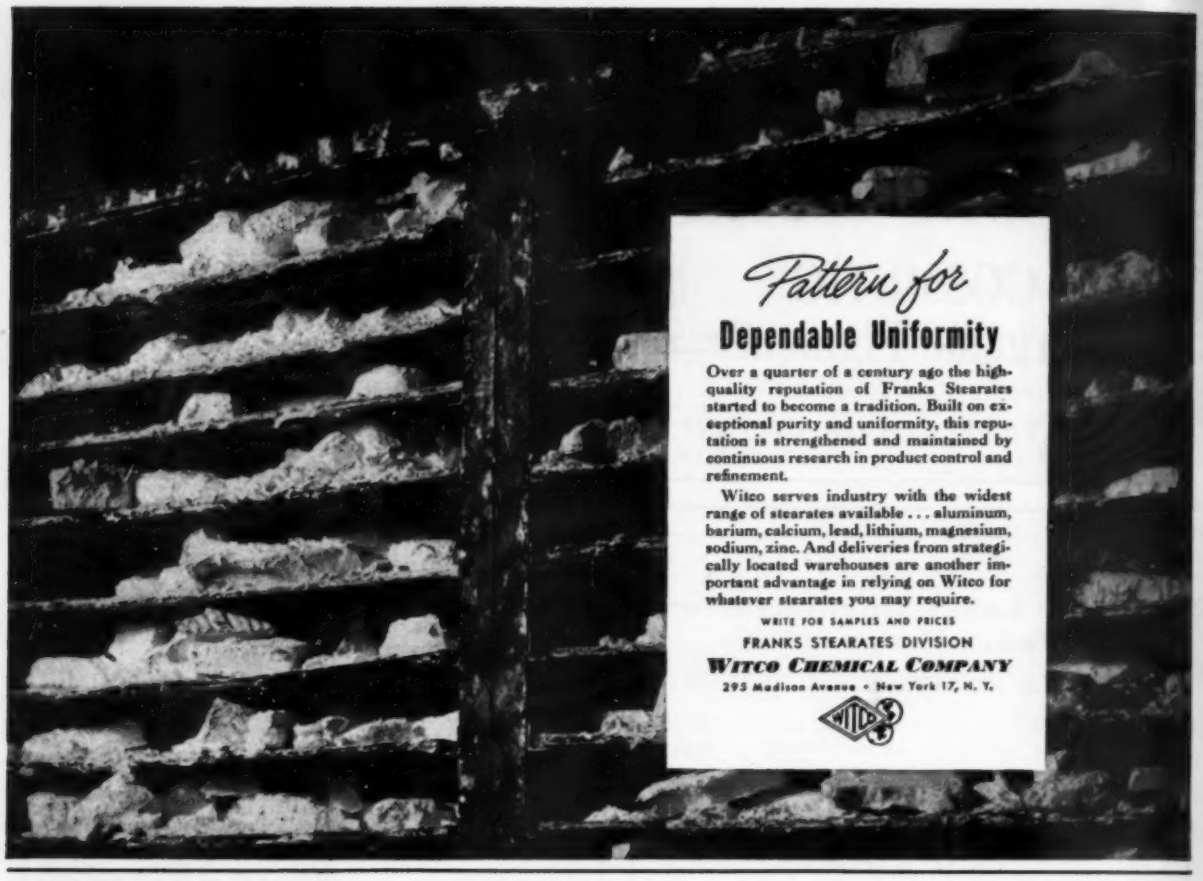
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